The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1375.—Vol. XXXI. LONDON, SATURDAY, DECEMBER 28, 1861. {STAMPED.....SIXPENCE. UNSTAMPED..FIVEPENCE.

MR. JAMES CROFTS, SHAREBROKER,
No. 1, FINCH LANE, CORNHILL. (Established 17 years.)

The following SHARES are BELOW THEIR REAL VALUE, if to be bought at or about the quotations, and quite safe as INVESTMENTS:—

Bottle Hill, 12s. 6d., 15s.	East Martha (£2¼ paid),	Unity, 14s., 16s.
North Frances, £2⅛, ¾.	£1⅛.	Old Tolgus Utd., £9, ¼.
North Minera, 18s., 20s.	Prosper United, £2, ¼.	Bryntail, £1⅛, 2.

Mr. Crofts is a BUYER of Calstock Consols (call paid), and wants offers of Prosper United at 39s. net, all calls paid.

*** Holders of mining shares DIFFICULT OF SALE in the OPEN MARKET may hear of purchasers, and also parties IN ARREAR OF CALLS, or sued by merchants, may learn their true legal position and be advised how to act, by applying to Mr. Crofts.

MR. JAMES LANE, No. 44, THREADNEEDLE STREET, LONDON, E.C.

James Lane has FOR SALE, at nett prices:—30 Arthur, 13s. 6d.; 10 Bottle Hill, 11s. 6d.; 5 Buller and Basset, £1; 20 Carn Camborne, 18s.; 2 Caradon Consols, £11; 100 Dale, 13s. 6d.; 10 East Carn Brea, £10; 20 East Budnick and Mount, 7s.; 10 East Caradon, £29¼; 20 East Russell, £3¼; 50 Great Wheal Martha, 24s.; 50 Gurlyn, 10s.; 2 Grambler and St. Aubyn, £18; 50 Great Retallack, 15s.; 50 Great Treveddoe, £1; 10 Hingston Down, £3⅞; 5 Harriett, 24s.; 30 Kelly Bray, 13s. 6d.; 50 Lady Bertha, 14s.; 20 Ludcott, £2⅛; 10 Moyle, £2¼; 20 Marke Valley, £10¼; 20 North Hallenbeagle, 20s.; 20 North Downs, £4⅞; 50 North Minera, 22s.; 10 Penhale Moor, £1 1s.; 2 Providence; 20 Redmoor, 5s. 6d.; 100 Ribden, 4s.; 20 Rosewall Hill and Ransom; 50 Sortridge, 13s. 6d.; 5 Seton, £124; 5 Trelawny, £17; 2 West Rose Down, £1¼; 20 Wh. Edward, £2¾; 10 Wh. Hearle, £16⅛; 50 West Silver Bank; 100 Worthing, £1.

PETER WATSON, ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES,
79, OLD BROAD STREET, LONDON, E.C.

Telegraphic messages to Buy or Sell Railway, Mine, and other Shares and stocks punctually attended to on commission, or at nett prices for cash, or for fortnightly settlements, with advice as to purchases or sales.

Seventeen years' experience (two in Cornwall and fifteen in London). Bankers: Union Bank of London.

N.B.—There are several dividend mines paying 15 to 25 per cent. on current market price, with increasing prospects; also, several progressive mines on the eve of a dividend-paying state, the shares in which will, no doubt, have a great advance in price.

ANNUAL MINING REVIEW.—In my "WEEKLY MINING CIRCULAR AND SHARE LIST" of Fridays, the 3d, 10th, and 17th January, 1862, Nos. 197, 198, and 199 (Vol. IV.), will be given AN ACCOUNT OF CORNISH, DEVON, AND WELSH MINING FOR 1861, with advice as to purchases and sales of shares.

Peter Watson will visit Cornwall and Devon next or following week.

N.B.—If subscribers and clients will refer to my recommendations during the past four months of some dozen mines, they will find that they have advanced considerably, as predicted—some from 75 to 400 per cent., whilst others which I stated should be sold, have since fallen in price.

Peter Watson, 79, Old Broad-street, E.C.

SHAREHOLDERS IN ENGLISH AND FOREIGN RAILWAYS, MINES, BANKS, DOCKS, AND MISCELLANEOUS SHARES.—At the urgent request of several London merchants, Stock and Mining, and local Stock Exchange Members, as well as from a ready support from my friends and connections in different parts of the country, I have been induced to undertake the publication of "The London Daily Record and Share List," which will give the latest prices, and being sent out every evening to the different parts of the country, will be in the hands of subscribers twelve hours sooner than any of the London daily papers, which will not give so much information as "The London Daily Record and Share List." The growing importance and profitable pursuit of the mining interest (especially in Cornwall and Devonshire Mines), in which some fifty millions sterling is invested, show the desirability of a daily record of prices and closing quotations of all the principal dividend and progressive mines. The list, which is published every evening at 5 o'clock, contains the transactions in the Stock and Mining Exchanges, English and foreign railways, English and foreign mines, joint-stock banks, American railways and securities, docks, and miscellaneous shares, price of Consols, dates of fortnightly settling-days, &c. Annual subscribers, £1 10s.; by post, £2 2s.; single copy, 2d.—Published by Peter Watson, 79, Old Broad-street.

EAST CARN BREA MINE AND WHEAL GRYLLS.—I have received a letter this week from Cornwall from an inspecting and well-known agent, who has for many years proved himself proverbially correct with regard to investments in mines which he has at various times inspected and recommended. He thus gives an account of the above mines:—"East Carn Brea has greatly improved since I sent you my last. The lode in the 50 east and west, although not very rich, is of a very promising kind, and likely to improve shortly. The 40, driving east from the western part of the mine, is worth from £45 to £50 per fm.; and the 30, a few fathoms in advance of it, is worth £35 per fathom; and in the 26 east, which is now completely through the cross-course, the lode is of the most promising description, and yielding fully 5 tons per fathom, worth 12*l.* per ton, or 60*l.* per fathom. This end is 40 fms. in advance of any other level in the mine, and is, therefore, passing into new or unexplored ground, which makes it a point of great importance, and there is a great length of ground still before them to the eastern boundary. They expect to sample upwards of 300 tons on Thursday next, the greater part of which has been raised from the ends and other tutwork bargains, and the reserves must now be something considerable. I have inspected this mine four or five times lately for different parties, and have also examined a large number of mines during the last few months in Devon and Cornwall, and I have no hesitation in stating that East Carn Brea, as a copper mine, and Wheal Grylls, as a tin mine, are the two best mines in each of their class, at the same depth, to be found in the two counties; and it is interesting to observe the rapid progress they are both making towards a dividend state."

Peter Watson, 79, Old Broad-street, London, E.C.

SHARES FOR SALE, CASH:—

25 Gt. Retallack, 13s.	25 Wheal Edward, £2⅜.	30 E. Caradon, £28 18s. 6d.
30 Wheal Unity, 14s. 9d.	10 East Alfred, 22s.	10 Wh. Harriett, 17s. 6d.
50 East Grenville, 32s.	10 Alfred Consols, 13s.	1 South Frances, £120.
10 Wheal Union, 37s. 6d.	5 Stray Park, £30¼.	2 Bryn Gwlog, £26⅝.
50 Wheal Arthur, 13s.	100 Wh. Grenville, 33s. 6d.	1 East Basset, £53¼.
10 Wheal Grylls, £14⅛.	10 Calstock Consols, 6s.	2 West Caradon, £48.
WANTED:—		30 East Grenville, 28s.
20 East Caradon, £28¼.	50 Wheal Arthur, 11s. 6d.	25 Wheal Grenville, 30s.
50 Wheal Grylls, £14.	20 Great Retallack, 10s.	2 East Basset, £51.

Peter Watson, 79, Old Broad-street, London, E.C.

MR. W. LELEAN, MINE SHAREBROKER,
11, ROYAL EXCHANGE, LONDON, E.C.

JOHN RISLEY, SHAREBROKER,
32, LOMBARD STREET, LONDON, E.C.

MR. JAMES HAMMON, STOCK AND SHAREDEALER,
1, CROWN COURT, THREADNEEDLE STREET, LONDON.

MR. E. GOMPERS, MINING OFFICES,
3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.
BUSINESS TRANSACTED in BRITISH and FOREIGN STOCKS and SHARES.
Terms, 1¼ per cent.—Bankers: London and Westminster Bank.

GEORGE RICE, SHAREBROKER, 1, FINCH LANE, CORNHILL, TRANSACTS BUSINESS for cash or account, at close prices, nett or 1¼ per cent. commission. SPECIAL BUSINESS in Bedford United, £5⅝; Caradon Consols, £10¼; East Grenville, 31s.; East Caradon, £28¾; East Carn Brea, £9⅞; Grambler and St. Aubyn, £17⅛; Hingston Down, £3⅝; Marke Valley, £10; North Roskear, £20; Sortridge Consols, 12s.; Tolvadden, 40s.; Wheal Unity, 14s.; Wheal Grylls, £14; Wheal Grenville, 34s.; West Caradon, £122½; West Caradon, £47.

East Caradon.—These shares closed last week flat, at £27¾. A new lode having been cut in the 60 cross-cut south, price rose to £29¼, £29¼. The market, however, closes weaker, £28⅞ to £29. I expect a further fall in price, in consequence of the new lode not being so valuable and important as was first anticipated, and all the other parts of the mine not looking so well. My agent inspected it on Thursday, and his report can be seen among the Mining Reports.

MR. GEORGE BUDGE, SHAREBROKER, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 14 years), has FOR SALE 2 South Frances, £120; 25 North Downs, £4¾; 40 East Carn Brea, £9⅞; 4 Stray Park, £30¼; 50 North Minera, 20s. 9d.; 5 North Roskear; 3 Providence, £39; 5 Grambler, £19; 50 Wheal Grenville, 36s.; 3 Margaret; 2 West Caradon, £48½; 60 Wheal Unity, 14s. 9d.; 50 Dale, 13s.; 100 North Nant-y-Mwyn, 3s.; 50 West Tolvadden, 2s. 6d.; 100 West South Caradon, 15s.; 2 West Sharp Tor, £50; 20 Great Wheal Busy, £5½; 20 Wheal Annie, £1; 5 West Bryn Gwlog, £10; 5 Billins, £20; 2 Wheal Seton; 100 West Polmear, 6s.; 100 Lady Eliza, 7s.; 75 Great Wheal Martha, 25s.; 30 Great Treveddoe, 14s.; 10 Wheal Hearle, £17½; 100 Redmoor, 5s. 3d.; 50 Great South Tolgus, £3 19s.; 50 Prosper United, 29s.; 100 East Martha, 27s.; 95 Bottle Hill, 12s. 6d.; 25 Wheal Union, 48s. 6d.; 50 Wheal Norris, 47s. 6d.; 20 North Crofty, 28s.; 50 Gurlyn, 9s.; 1 Devon Great Consols; 40 East Russell, £3¼; 3 Heradsfoot, £38; 45 Lady Bertha; 100 Worthing, 11s.; 25 United Mexican, £7 18s. 3d.; 7 Wheal Grylls, £14; 50 Tincroft, £7 17s.; 10 Bedford United, £5 7s.; 100 Ribden, 4s. 6d.; and 100 St. Day United.

Parties who would be induced to buy or sell shares by the recommendations contained in circulars or advertisements would do well first to submit their offers to Mr. Budge.

GEORGE MOORE,
1, CROWN COURT, THREADNEEDLE STREET.

In any business that George Moore is favoured with, in which he is the buyer, he will give CASH ON RECEIPT OF TRANSFER.

JAMES HERRON has FOR SALE the following SHARES, at the prices quoted, and FREE OF COMMISSION:—

20 Alfred Consols, 12s.	10 Gt. So. Tolgus, £4.	5 S. Bryn Gwlog, £5¾.
10 Anglo Mexican Mint, £15¾.	10 Gonamena.	1 S.Wh. Frances, £117½
30 Boscundle, 22s. 9d.	20 Hings. Down, £3 18s 9d	3 Silver Rake, £8¾.
1 Bryn Gwlog, £27½.	2 Herward United, £8.	5 South Carn Brea.
3 Billins.	5 Herodsfoot, £38⅛.	20 So. Condurrow, 9s. 9d.
1 Basset, £87½.	20 Holmbush, £1 3s. 9d.	2 South Basset, £123¾.
5 Bedford United, £5⅛.	20 Kelly Bray, 15s. 6d.	1 Trelawny, £16⅜.
1 Botallack.	30 Lady Bertha, 13s.	20 Tamar Con., £1 3s. 9d.
1 Brynford Hall, £17.	30 Lady Eliza, 7s. 9d.	10 Tincroft, £7 15s.
50 Cefn Cilcen, 10s.	10 Linares, £7 10s.	15 Tolvadden, £2½.
20 Camborne Vean, 42s.	5 Long Rake.	10 Treloweth, 26s.
30 Carn Camborne, 16s. 9d.	10 Ludcott, £2⅜.	50 Tees Side, 3s. 6d.
1 Cargoll, £14 18s. 6d.	50 Molland, 6d.	50 Vale of Towy, 4s. 8d.
10 Cuddra, 42s.	10 Marke Valley, £9 17s 6d	3 W. R. Down, £10½.
2 Clifford Amalgamated, £31.	1 Mary Ann, £16 15s.	5 West Stray Park, £3¾.
	50 North Minera.	20 Wheal Unity, 14s.
1 Condurrow, £63½.	5 No. Basset, £2 17s. 6d.	1 West Seton, £290.
2 Carn Brea, £77½.	2 No. Treskerby, £19¾.	2 West Basset, £14⅛.
5 Craddock Moor, £25¾.	20 North Downs, £4¾.	50 Worthing, 11s.
20 Charlotte Utd., 10s. 9d.	20 New Frances, 5s 6d.	1 Wendron Con., £10⅞.
20 Dale, 13s.	20 North Phœnix, £4½.	20 Wh. Grenville, 36s. 6d.
30 Drake Walls, 19s. 6d.	50 North Rhine, 11s. 6d.	30 Wheal Crebor, 9s. 6d.
1 Ding Dong, £13¾.	2 No. Roskear, £22½.	5 Wh. Edward, £2 6s 9d
20 East Russell, £3½.	10 North Buller, £3.	50 West Polmear, 6s.
5 E. Carn Brea, £10 3s 9d	20 North Robert, 18s. 9d.	2 West Sharp Tor.
20 East Grenville, 34s.	50 North Hafod, 10s.	20 West Tolcarne, 6s. 6d.
5 E. Caradon, £28 18s 9d.	5 North Crofty, 39s.	20 Wheal Moyle.
1 East Basset, £53¾.	50 North Rhine.	30 W. So. Caradon, 18s 9d
20 East Kongsberg (fully paid up), 35s.	5 Old Tolgus.	1 West Caradon, £48.
	1 Providence, £42.	5 Wheal Grylls, £13⅞.
30 Great Wheal Vor, £7½.	10 Par Consols, £7 17s. 6d.	5 Wheal Hearle.
3 Gt. Fortune, £12⅜.	10 Prosper United, 41s.	1 West Bryn Gwlog.
2 Grambler, £18½.	20 Port Phillip, 30s.	50 West Wendron, 2s. 6d.
30 Great Alfred, 8s. 6d.	1 Rosewarne Utd., £18 15s	30 West Silver Bank, 20s.
50 Great Moelwyn (£1 15s. paid), 22s.	20 Rosewall Hill, &c.	1 Wheal Seton, £123.
	30 Ribden, 4s.	50 United Mex., £8 12s 6d
30 Great Crinnis, 17s. 6d.	10 St. John del Rey, £50½	20 Wheal Norris, £2 8s 9d
25 Great Martha, 24s.	1 Stray Park, £30¼.	10 Wheal Union, £2½.
30 Great Retallack, 13s.	2 St. Ives Con., £29½.	10 West Trefusis.
	30 Sortridge Cons., 12s. 9d.	30 Wheal Arthur.
	1 South Tolgus, £47½.	5 Wheal Uny, £4 18s 9d.

2, Adam's-court, Old Broad-street, Dec. 27, 1861.

MESSRS. VIVIAN AND REYNOLDS, 68, OLD BROAD STREET, LONDON, E.C., MINING ENGINEERS, INSPECTORS of MINES, COMMISSION, and GENERAL AGENTS for the PURCHASE or SALE of MINE SHARES, RAILWAY, and EVERY OTHER DESCRIPTION of STOCK.

Commission on share transactions, 1¼ per cent. on £100 and above, and 2½ per cent. or less sums.

MR. C. POWELL, MINE SHAREBROKER,
2, SPREAD EAGLE COURT, FINCH LANE, LONDON, E.C.

MR. EDWARD COOKE, SHAREBROKER,
5, HERCULES PASSAGE, near the Stock Exchange, London, TRANSACTS BUSINESS for principals in RAILWAY, MINE, BANK, and INSURANCE SHARES, &c., at the usual Stock Exchange rate of commission, and from the contiguity of his office to that institution he is enabled to operate promptly on all orders entrusted to his charge, either by telegraph or post.

A Map of New South Caradon, together with reports from Capt. Johns, of West Caradon, and others, sent on application.

Dec. 27, 1861. Bankers: London and Westminster, Lothbury.

MR. GEORGE BATTERS, of No. 5, COWPER'S COURT, CORNHILL, DEALER in BRITISH MINING SHARES and OTHER SECURITIES, from long experience in all mining stocks, can advise as to investment of capital at closest market prices.

Mr. Batters has special business in East Caradon, South Caradon, Marke Valley, East Carn Brea, &c., and strongly recommends his clients to eschew mythical concerns, where the only mining is in the pockets of the unwary, and to buy such shares as above enumerated, that at all times are marketable, and out of which the vendor can only obtain a reasonable commission.

East Carn Brea shares may be expected shortly to sell at double or treble the present quotations of about £9¾ to £10. Ore ground is discovered sufficient to return in profit all that the shares are now selling for, and the reserves are being increased at the rate of about 500*l.* per month: 200 shares for sale at market price, or any number bought at a small marginal difference.

MR. BATTERS has SPECIAL BUSINESS in the SHARES of EAST CARADON, MARKE VALLEY, BILLINS, and EAST CARN BREA.

MESSRS. C. TOOKEY, F.C.S., AND M. W. JOHNSON, F.C.S., ASSAYERS, ANALYSTS, AND CONSULTING CHEMISTS.
LABORATORIES, 44, LINCOLN'S INN FIELDS, W.C.

MR. T. ROSEWARNE, 75, OLD BROAD STREET, LONDON, E.C., has BUSINESS TO TRANSACT in—

Clifford Amal., £32½.	Long Rake, £13¾.	West Sharp Tor, £51.
E. Caradon, £29.	North Downs, £4 17s. 6d.	Wheal Arthur, 13s. 3d.
East Russell, £3 5s.	North Robert, 19s. 6d.	Wheal Edward, £2 8s. 9d.
East Grenville, 34s.	North Crofty, 36s.	Wheal Harriett, 21s.
East Carn Brea, £9 18s 9d	Sortridge, 12s. 6d.	Wheal Norris, £2 6s 3d.
Hingston, £3 15s.	Wheal Grylls, £13⅞.	Wheal Seton, £123.
Herodsfoot, £37¾.	Wheal Grenville, 36s.	Wheal Unity, 14s. 9d.

East Caradon Mine, price £28½ to £29, the whole value of the mine selling now being about £178,000. Parties holding these shares should realise at present high prices, and send their own agents to inspect.

T. Rosewarne takes this opportunity of thanking his friends and clients for the very liberal support they have bestowed on him during the present year, and begs to assure them that he will still continue to transact business on the same close market prices, and by giving sound advice merit that confidence hitherto reposed in him.

December 27, 1861. Bankers: Bank of London.

MR. JAMES HUME, SHAREBROKER, 74, OLD BROAD STREET, LONDON, E.C.,

THE MINING SHARE MONITOR for December contains SPECIAL INFORMATION and REPORTS on WHEAL EDWARD, SETON, EAST CARN BREA, UNY, NORRIS, DRAKE WALLS, &c.

Mr. Hume has business to transact in the above mines, as well as all other legitimate shares dealt in on the market.

Commission, 1¼ per cent.

MR. R. H. M. JACKMAN, MINING AND SHAREBROKER, 2, ADAM'S COURT, OLD BROAD STREET, and BRITISH MINING EXCHANGE, FINCH LANE, CITY, E.C., has FOR SALE, at nett prices, the following SHARES:—

1 South Caradon, £315.	100 East Budnick & Mount, 3s.	10 East Caradon, £29.
100 West So. Caradon, 15s.		20 New So. Caradon, 13s.
100 Wheal Hope, an offer wanted.	50 Great Caradon, 10s.	100 Great Retallack, offer wanted.
	50 Tess Side, 4s.	
3 West Caradon, £48.	200 Molland, 1s. 3d.	5 Margery, £7¼.
And is a BUYER of—		
5 North Roskear, £22.	100 Uny, £4⅞.	1 Seton, £122.
3 Wheal Reeth.	100 Tees Side.	1 West Seton.

Dec. 27, 1861. Bankers: London and Westminster, Lothbury.

BRITISH AND FOREIGN STOCK, RAILWAY, AND MINING SHARES BOUGHT AND SOLD by Messrs. FULLER AND CO., No. 26 CHANGE ALLEY, CORNHILL, LONDON. The holders of stock are invited to communicate with them, either for the purchase or sale of such stocks.

Messrs. Fuller and Co. call especial attention to the present favourable opportunity of investing in British mines, being perfectly free from risk, and paying 15 to 20 per cent. Also, in a few progressive mines, upon which 250 to 500 per cent. profit may be realised in a few months. Telegraphic messages promptly attended to.

Bankers: Bank of England.

MESSRS. FULLER AND CO., 26, CHANGE ALLEY, CORNHILL, LONDON, are in a position to PURCHASE POYAIS BONDS and LAND WARRANTS, the holders of which are invited to submit any portion of £250,000 Five per Cent. Bonds, £250,000 Three per Cent. Bonds, and £500,000 Land Warrants. Cash paid on delivery.

MR. MURCHISON'S REVIEW OF BRITISH MINING FOR THE QUARTER ENDING 30TH MARCH, 1861, is NOW READY.
Price One Shilling. At 117, Bishopsgate-street Within, London, E.C.

SALE OF MINING SHARES BY PUBLIC AUCTION.

MR. T. P. THOMAS'S NEXT SALE of MINING SHARES will take place at Garraway's, on Thursday, the 16th of January next. Persons desirous of offering shares for sale must give notice of same at the offices of the auctioneer, 2, Crown-court, Threadneedle-street, London, E.C., on or before the 9th of January.

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL MINING SHAREDEALER, 16, HACKINS HEY, LIVERPOOL.

Mr. Thomas has had placed in his hands FOR SALE a number of SHARES in the MOUNT PLEASANT LEAD MINE, near Mold, a mine likely to be much richer than at present, but which now pays in dividends a much larger percentage than any other mine in the list. Prices and particulars on application.

JOHN R. PIKE OFFERS the undermentioned SHARES at the prices quoted, FREE OF COMMISSION:—

5 Bryn Gwlog, £26⅜.	20 East Carn Brea, £10.	50 Sortridge, 12s. 3d.
4 Billins.	50 East Russell, £3 2s. 6d.	4 Stray Park, £30¼.
50 Bottle Hill, 11s. 9d.	20 East Trefusis, £1 13s.	1 South Tolgus, £46.
25 Bryntail.	50 Gt. Retallack.	1 South Caradon, £318.
100 Calstock Cons., 6s. 6d.	25 Hings. Down, £3 16s 3d	25 Treloweth, £1⅜.
1 Condurrow, £64.	30 North Basset, £2⅜.	2 West Caradon, £48.
10 Cook's Kitchen, £29¼.	50 No. Downs, £4 13s. 9d.	25 Wh. Grenville, 36s. 6d.
50 Charlotte Utd., 11s. 3d.	10 No. Treskerby, £19⅞.	2 Wh. Margaret, £39¾.
1 East Basset, £54.	50 North Robert, 18s. 6d.	4 Wh. Mary Ann, £16⅛.
50 East Rosewarne, 24s.	10 Rosewall Hill, £2 6s 6d	100 Wheal Unity, 14s.
10 East Caradon, £29.	100 North Minera.	

Mr. Pike will be happy to insert any shares in his list free, unless sales are effected, when a commission of 1¼ per cent. will be charged.

3, Pinner's-court, Old Broad-street, London, E.C., Dec. 27, 1861.

Now ready, Second Edition, with latest Official Statistics,

BRITAIN'S METAL MINES:
A complete Guide to their Laws, Usages, Localities, and Statistics.
By JOHN ROBERT PIKE, 3, Pinner's-court, Old Broad-street, E.C.
One Shilling, or free by post for thirteen stamps.

SHARES WANTED:—

1 Botallack.	25 Trencrom, 20s.	1 Condurrow, £60.
1 Levant.	15 North Roskear £22.	2 South Basset.
25 Creegbrawse.	1 South Frances, £112½.	5 Ding Dong.
25 Lelant Consols.	1 Wheal Basset.	25 Bryntail.
5 Grambler.	5 Rosewarne.	25 Wheal Uny, £4¾.
10 Kitty (Lelant), £5.	25 Lady Bertha, 12s. 6d.	

H. B. Rye, 77, Old Broad-street, E.C., and Mining Exchange.

FOR SALE, EACH NETT:—100 Wheal Moyle, 42s. 6d.; East Carn Brea, £9⅜; 100 New Frances, 5s.; 5 North Treskerby; 50 New Treleigh, 24s.; 1 East Basset, £54; 3 Grambler, £18½; 20 Kitty (Lelant), £5¼; 20 East Grenville, 33s.—Apply to John W. Hutchinson, 78, Old Broad-street, London.

NOTICE OF REMOVAL.

MR. FREDERICK WILLIAM MANSELL,
MINING SHAREBROKER.
On and after the 21st of December,
OFFICES at 75, OLD BROAD STREET, LONDON, E.C.

MR. J. S. PHILLIPS, C.E. AND M.E., SHAREBROKER, &c.,
7, GEORGE YARD, LOMBARD STREET, LONDON.
London office for North Porthilly, and North Pool Mines. Shares should be bought in the former. (See Official Report in the *Mining Journal* of the 16th inst.)

MR. F. LISABE, C.E. AND C.M.E., may be consulted by letter addressed to No. 38, GLOUCESTER CRESCENT, REGENT'S PARK, N.W.; or personally at his office, No. 25, MOORGATE STREET, CITY, upon all matters connected with mining.

MR. THOMAS SPARGO, MINING ENGINEER, STOCK AND SHAREBROKER,
224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.
Commission, 2½ per cent.

MESSRS. THOMAS PENROSE and THOMAS PRICE UNDERTAKE ASSAYS and ANALYSES of EVERY DESCRIPTION of MINERAL PRODUCT, FUEL, and MANURES, at Messrs. Richardson and Co.'s Assay Office and Laboratory, Copper Ore Wharves, Swansea.

WHEAL HEARLE MINE.—FOR SALE (cash), TEN SHARES in the above mine, at £19 10s. per share, all calls paid.—Apply to "A. B.," care of Mr. Lane, 44, Threadneedle-street, City, E.C.

CONDURROW MINE.—WANTED TO PURCHASE, either ONE or TWO SHARES in the above mine.—State price to "H. W.," at Mr. Dixon's, grocer, St. Nicholas-street, Truro.

WANTED, a SITUATION as COLLIERY MANAGER or AGENT, by a middle aged man, strong and active, who has been connected with collieries in Lancashire from a youth, and in the above capacities about 15 years. A good surveyor, planner, &c. Satisfactory references.—Address, "H. Z. J.," Post-office, St. Helen's, Lancashire.

WANTED, the MINING JOURNAL regularly the SECOND DAY AFTER PUBLICATION, for which half-price will be paid.—Address, "Y. Z.," Post-office, 40, Mill-street, Toxteth Park, Liverpool.

£1500 TO £2000 WANTED as LOAN, on SECURITY of PLANT, MACHINERY, and LEASE of a COLLIERY. The present works have cost about £10,000, and the above sum is required for the erection of additional machinery; 8 per cent. interest will be paid for an immediate advance. None but principals treated with.—Apply by letter, to Box 220, Post-office, Bristol.

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Mining Luck,—a Myth.

A CHRISTMAS TALE FOR MINERS.

By George Henwood, M.E.

German philosophers of the modern school are at the present period busily and anxiously engaged investigating the mysterious occult science (Heaven save the mark!) of Oad, or Odin, including the subject of our tale. The more platonic and practical *savans* are also equally industrious in proving that Mining Luck, though admittedly odd, if not oad, is not a Myth, but a result deduced from observation, perseverance, and applied natural and known laws. As a great deal can be said on both sides, we shall not attempt to enter deeply on so elaborate a controversy. We are satisfied that the advocates themselves of both systems are so much smitten with the fact, that none would refuse it, from whatever source derived. We fear but few can give substantial proofs of the practical adaptation of their own theories. Since this is the Christmas time, when Fairies, and other great personages of the land of spirits, are especially permitted to appear at our theatres to instruct and amuse, in all sorts of characters, from Cinderella to Heigh Diddle Diddle, why should not our Myth, who is confessedly a near relation to the latter celebrity, make his bow on our stage (all the world's a stage), so that by studying it as it really is we may endeavour to deduce a result independent of either of the philosophical schools? Our Myth, though invisible, is, and has long been, no unimportant figurante in the world's history. It has been the means of creating more wealth and comfort than all the German *savans* the world has yet produced, or ever dreamed of in their philosophy of Oad, or Odin.

The origin of our hero (we at this time have a right to, and must, personify to be intelligible) is lost in the annals of time: notwithstanding he has appeared in Wales, we are not so thoroughly Cambrian as to claim for him a pre-Adamite existence. We read that Tubal Cain was a worker of metals; we think it but fair to suppose that old gentleman was, therefore, a dealer in minerals—*ergo*, a dabbler in mining, took the cacoethes, and looked out for Luck. We know for certain that he was in the Ark with Noah, and that he commenced business the moment the family left it. The Children of Israel, in ancient as well as modern days, received his particular attentions, of which the reigns of David and Solomon are favourable and decided proofs. Evidences are not wanting of his having been in the land of Egypt, though certainly not in the house of bondage, as, despite the most despotic potentates, he defies dictation, bars, or chains; his reign is universal, his power omnipotent, and his presence ubiquitous, thus certainly assuming the highest attributes. Nor are his admirers less numerous, or more unanimous, than these assumptions may be supposed to deserve and obtain. Many, nay countless, are the myriads of votaries, of all climes, of every colour, creed, and language under the sun, who daily and hourly offer their genuine, heartfelt aspirations that he will deign, if not at present, eventually to look kindly on them, and grant one, if only one, welcome, thrice welcome, visit. So erratic, so extraordinary, are the vagaries of Mining Luck, that we find him at one moment in Australia, patronising a barbarous, blinkeyed, taterdemalion Chinese, handing him a nugget of gold which makes him richer and far happier than the happy among the Celestials. At one time taking pity on the poor, witless, half-starved negro slave—manumitting him by the discovery of a priceless gem. Anon lavishing profusion on some self-satisfied, conceited Cornishman; or, in our own land, busy in the toilsome, dreary, dangerous abodes of our colliers, scattering blessings on hundreds of thousands, and diffusing comfort in every neighbourhood he visits, still by no means satisfying the craving appetites of both Dives and Lazarus, who alike continually do cry—Give give, give! They who have been fortunate enough to have enjoyed our Myth's favours join a peculiar, much-prized canine brotherhood, called "Lucky Dogs"—though widely distributed, in the aggregate a somewhat numerous party.

Mining Luck, though neither dictating or to be dictated to, still maintains a numerous and splendid staff of self-styled professors, all and each pretending to be better acquainted with the Myth than the other, yet none giving sterling proof of ever having accomplished the great disideratum, until the powerful influence of the magic wand, wielded only by him, converts ignorance and assumption into wisdom and forethought. Then admiring crowds do the Myth's myth honour, and pay implicit homage to the deputy's bidding. Though many profess to see a hole through a millstone before it is bored, and to determine whether luck resides on the bed of mineral before it is tried, yet seldom the conjuror is believed. If the deputy produces his golden proof of having been visited by Luck, the prejudice and difficulty disappear, and mankind will believe the most absurd improbabilities from his oracular lips. Even these are sometimes over confident, and are utterly confounded: they discover when too late, and just as they fancied they were to grasp the prizes, that they have been following a myth more subtle, more delusive, more relentless than the *ignis fatuus*. Such has been the fate of thousands, and will be the fate of thousands more. The visits of Mining Luck are like those of angels, "few and far between." Our genus of the mineral world also has numerous establishments of offices, in which the presiding oracles, or self-appointed agents (like other pedantic demagogues) dispense their nostrums, under the specious, delusive snare of "advice gratis" as to the best and most eligible modes of securing to applicants and clients the advantages to be derived from their knowledge. They, like the professors of the science of Oad, or Odin, pretend to act as media between the votaries of the shrine of wealth and the presiding demi-god.

Advertisements numerous as false representations, puffs as palpable as Boreas's roughest blasts, blandishments as soft as Zephyr's sighs, and audacity as great as Hector's, are all and each in turn employed to captivate and to persuade the hesitating that the particular oracle issuing the document is the real, genuine, unsophisticated, authorised medium. So numerous and unblushing are they, that they are only exceeded in number and effrontery by the oracles of the goddess Hygea (also a myth). The advice of her peripatetic pretenders is by no means unlike that of the expounders of our Myth, "If one dose does not take effect, try two," increase the dose proportionably, and they will certainly display its admirable qualities in time—aye, certainly.

Various are the means of self-cure adopted by those who have vainly tried every nostrum, and by those who have been influenced by the terrible and destructive monomania, "that they have been, are, or will be the particular and privileged objects of Luck." These generally herd together, and form pig-headed, obstinate committees of management, who do not know what they are doing, and will not be told; who perform a Chinese variety, by every one singing his own melody. Though forming a chorus they never act in concert; each insists his opinion is correct, substantiating his assertion by reciting a long tale of his dear-bought experience, and asserting his determination never again to be persuaded. Thus they go on; instead of propitiating Luck, they defeat their own ends, doing precisely the contrary. We could adduce hundreds of cases in point, but they are needless. Every miner knows to his sorrow that the Myth has been driven off by these ignorant, positive personages. Some, in their own opinion more cunning than their fellows, isolate themselves, still acting, or course, on their own judgment. By far the wisest plan; for if the fickle spirit does not (Harlequin like) strike them with the golden end of his wand, they will, if they be hit with the iron, or Clown side, be still, probably, left skin-whole, an advantage they may not possibly enjoy if they trust themselves amongst the oracles.

Luck is proverbially said to dwell in caves: our Myth dwells in mines; we presume they are equivalent, as the same results follow in both cases, provided the same means to similar ends be adopted—*i.e.*, diligent, straightforward, determined purpose, not to be thwarted or warped my misfortune, or to be over-elevated by success; so shall the Myth be, indeed, embodied to abundant benefit, despite the speculations of theorists and philosophers, the advice of oracles, or the dictation of overbearing committees, as the perusal of a few modern mining celebrities will show by their brief histories.

In the neighbourhood of Helston, Cornwall, resides a gentleman who, from small beginnings, has by mining amassed a splendid fortune, through every vicissitude to which poor humanity is subject. This worthy has pursued his honourable, praiseworthy, straightforward course: he owes his all to our Myth, but by the care, self-reliance, and discretion he has so eminently displayed, has placed himself at the very head of his profession; he has retired to enjoy his *otium cum dignitate* in a splendid mansion, where he dispenses hospitality with a liberal but not lavish bounty. Whenever he invoked the sprite, and the call was not responded to, he was neither cast down or dissatisfied; he still pursued the even tenor of his way, having full assurance that one day or the other the long lane would end or have a turning, and that Luck would give him a chance by-and-bye. Our Myth did as expected; but this in nowise elated our worthy, who, far from squandering the wealth so easily acquired, used it judiciously, causing our Myth again and again to visit him, which opportunities could not have been offered had he not husbanded his good luck. Most of our Cornish readers will know this "lucky dog."

Our Myth has bestowed his smiles on a worthy who resides at Redruth, Cornwall, who also, from very humble origin, has been most successful. The first aid of our demi-god would have been of little service to him had he been content to have folded his arms and cried, "Hold, enough." By carefully husbanding the resources of the first stroke of Luck he waited patiently, and was thus enabled to do so, until a second, aye a third and a fourth came. By vigorously embracing the opportunities thus afforded he not only enriched himself, but many others, and now occupies a position alike honourable and distinguished. His success has arisen from calm judgment and patience; he never attempted to dictate and coerce, or insist on impossibilities, as some committees we could name do. He has always advised others to act on his own motto, and, as he himself acted—"Bide your time, and keep your powder dry." This gentleman stands prominently and deservedly as an example to be imitated by all who desire to have and to benefit by the favours of Fortune.

At Penzance, the highest honours his fellow-townsmen could bestow have been assigned to one who, by steady perseverance in mining, after many bitter disappointments and wearyings, after many years of endeavour, losses, and crosses; always in hope, yet that hope deferred daunted him not. At length Luck dawned. Providence poured a golden shower, to his and all his friends' infinite joy and satisfaction; seldom, indeed, has Luck fallen on a more worthy or more deserving individual.

Near Leeds, not long since, some parties who knew nothing of the business set about mining for coal; as might have been naturally expected, disappointment was experienced. Practice and dearly-bought lessons taught them wisdom. They, too, were largely gifted with those most necessary qualifications for mining pursuits—patience and perseverance. By the exercise of these, and by untiring industry, they met a rich reward in the discovery of most valuable beds of coal and ironstone.

In Cornwall the miners sometimes work on a system of bargain, termed *tribute*, or a percentage on the value of the ores they discover and raise. This method affords to persevering, clever, industrious men unusual opportunities of gaining considerable sums of money; they, however, have to run great risks to obtain even a livelihood, as they not unfrequently adventure for months together without earning a shilling. Many, many a comfortable cottage, with its neat garden and enclosure, may be recognised in that county as the result of a *stur*t; a stroke of good Luck is so called by the miners.

The columns of the *Mining Journal* recently recorded the brilliant mining success of Messrs. Cobden, Bright, and Co. in a Welsh undertaking. To the Myth also Glasgow is indebted principally for her proud position; England, her's as a nation. We might multiply cases *ad infinitum*, and in every clime, thus satisfactorily proving the ubiquity of the Myth.

Without Mining Luck what would have been the fortunes of many of our medæval millionaires? Whence came the enormous revenues of the Dinorben, the Myddelton, the Bushell families; more lately those of the Palmerston, Londonderry, and Durham houses; the splendid income of Greenwich Hospital; then, more recently, the Lemons, Dunstonvilles, Beaumonts, the Williams, and hosts of minor account? In Australia and in California what prodigious progress has been made in a few years; what may yet be achieved can only be judged of by precedent, then how great. Instances of Mining Luck are of daily occurrence, but they are far more frequently owing to well-directed labour and capital than to any fashionable occult science, oracles, or media. Even the old well-known dowsing or divining rod has given way: the rod of Science, the mighty lever of the modern world, like the rod of Aaron, has swallowed up all the magicians' rods, and not increased itself thereby. Well, indeed, it is so, for had the pretenders their own way, according to their own declarations—could they call spirits from the vasty deep, like Endor's witch—control Myths, or fly by nights on broomsticks (as witches conventionally do)—they would, if possible, be more mischievous than pig-headed, meddling committeemen, which is scarcely credible; they would certainly do more real injury than they now, in their ignorance, can actually do. The damage they now perpetrate is great, still it is not utterly ruinous. They sometimes accidentally stumble over a fact, like the authors of the "Vox Stellarum, or Old Moore's Almanac," or the more pretentious looking "Raphael prophecy," happening to prognosticate, by a horribly barbarous hieroglyphic, some event which must happen in the natural order of mundane affairs. That they possess any means of knowing, or of divination beyond that of their fellows, who pay the same attention to, and study with equal assiduity, the arcana of Nature, we utterly deny. We class them as odds and ends with the oads, and hand them over to the tender mercies of a committee composed of their rabid, disappointed, and victimised dupes and clients, who have no right to look for or expect Luck.

We think that though we have shown Mining Luck may be to some a Myth, or rather that good fortune in mining is sometimes produced by mere chance or unexpected circumstances, these would no more come about without trial than a raven would be fed without seeking its food; and we opine we have demonstrated that success is not to be purchased or dictated, any more than wind is to be procured at the hands, or at the behest of a Lapland harridan. We submit that we have proved beyond controversy or contradiction that our platonic practical *savans* are perfectly right in their view of the case: we think with Pope's Chamelion—

> "When first the creature found a tongue,
> You all are right, and all are wrong."

One thing we most certainly must deduce from our observations, and that, after all, is the main object of mining, the pith, marrow, and moral of our tale—that Fortune, whether mythically, philosophically, or laboriously derived, can confer no honour and confort to its possessor, or benefit in its distribution, unless it be wisely managed during its accumulation, and as judiciously expended: when this is the case it is doubly blessed.

The closing year has been one of almost unprecedented success in mining affairs, though at one period the contrary had been anticipated. We think the miner in every branch of the ancient, noble, yet dangerous profession, has ample cause to look forward to the year of which we are on the threshold with well-grounded reason for sanguine hopes. And now, having introduced our odd or oad Myth as the hero of our Christmas tale, and having occupied the stage of the *Mining Journal*, and the attention of its readers for so lengthened an audience, we beg our Myth to make his bow, wishing every miner, and everyone connected with the mining interest, in every part of the world, who may do us the honour to peruse our story, many happy returns of the festive season—that his pudding may be spiced, his punch sweetened, and his dreams solaced by a piece of Mining Luck, not mythical, but real. Adieu.

And now, O Demi-god! having said so much about you, and having introduced you to such goodly society, what have you to say to me?—"Keep your powder dry, and wait your turn, —— ——!"

Dressing Ores—Jigging Machinery.—For some time past a jigging-machine, upon a novel princip e has been in use at the Minera Mines, and from the very excellent results which have been obtained from it, every confidence is expressed of its being generally adopted. The machine is the invention of Mr. Edmund Edwards, C.E., of Beaufort-buildings, and for efficiency and economy it is certainly unsurpassed. As the ordinary mode of jigging will be familiar to our readers, we may state that Mr. E. Edwards's invention is a modification of Petherick's machine, and that he has succeeded in completely removing the defects which were admitted to exist in the original: all that could be deemed complicated in Petherick's machine has been substituted by arrangements so simple, that it would be almost impossible for anything but actual wear to render repairs necessary. In the improved apparatus the sieve is fixed, the separation of the ore of the several gravities being effected by the motion of the water; but the point in which Mr. Edwards gains such advantage is the mode of obtaining the necessary motion in the water. Hitherto pistons and valves have been considered indispensable, the consequence being that toothed wheels, and other gearing liable to derangement, were required; but by the use of a single elastic cover, moved by the rotation of cams upon the main axle, Mr. Edwards secures an equally good effect, combined with immense strength. The water, when in the operation of jigging, is not permitted to run to waste, as it is when Petherick's or Hunt's machines are used, but is used over and over again, until it becomes too foul, when it can be at once removed, and a fresh supply introduced. The refuse ore is removed by a series of hinged scrapers, fixed to a frame working upon a small tram, and to which a to-and-fro motion is communicated by a crank upon the axle already referred to. It will be apparent that by this arrangement three or more jets of water can be forced through the sieve for each stroke of the scraper-frame with the greatest ease. Since to adventurers, however, the profits likely to accrue from the use of a machine receives far more attention than its mechanical details, it may be stated that Mr. Edwards has treated hundreds of tons of refuse, containing only 2 or 3 per cent. of lead, and without crushing it down small, with complete success, the dressed stuff being worth from 20 per cent. upwards. This selected ore is then crushed and dressed for market. The expense of crushing a large proportion of refuse is thus saved, and the produce made marketable, at the lowest possible cost. By a slight modification of detail the machine is made applicable to the washing of coal, and has been found to answer admirably for that purpose. We shall take an early opportunity of describing the invention more minutely, and in the meantime may recommend the inspection by all interested of the full-sized machine at Minera, or of the working model at the inventor's offices.

Original Correspondence.

PREVENTION OF ACCIDENTS IN PIT SHAFTS.

Sir,—With reference to the letter in the Journal of Dec. 14, of Mr. R. J. Phillips (whom I have not the pleasure of knowing), permit me to say, first of all, that I do not lay claim to any credit as the *inventor* of what may be termed the safety-chain, which I have recommended to be used by persons ascending and descending shafts,—in fact, I discovered the other day that there is an old viewer at the Willingsworth Colliery who has used a similar precaution for some time past.

The chain is simply a small chain, with a ring at one end and a "hook" at the other, by which to attach it to the "band or coupling chain," tackled skip or cage. By passing the "hook" end of the small chain through the ring, a noose is formed which will enclose the body of the person in the skip or cage, under the arms, so that in case of his falling from giddiness, or other causes, he would thus be supported.

Every person in the habit of descending shafts may provide himself with one of these "safety-chains," but it appears preferable that half a dozen or more should be attached to each tackled skip, &c.; any blacksmith can make them, and the cost will be only about 1s. 6d. or 2s. each chain, or not more than 10s. or 12s. for a tackled skip, &c. I am happy to say that this simple but effectual precaution has been adopted at several collieries in this district, and I hope its use will become general, especially in pits where loose skips are at present in use. I trust the day is not very remote when most, if not all, the pits in this district will be provided with guides, cages, &c., and the use of loose skips for winding purposes extinct. However, at collieries where to some extent these excellent shaft arrangements have been effected, experience shows they are not entirely exempt from accident, which I am sorry to say is so fatal to some of the workmen, by falling out of the cage whilst ascending or descending, which, I believe, may be prevented by the application of the safety-chain.

J. P. Baker,
H.M. Inspector of Mines.

Wolverhampton.

VENTILATION OF COAL MINES.

Sir,—I should not have deemed it necessary to have replied to your correspondent, "M. E.," had it not been for the possibility of his remarks coming under the notice of some of your readers who may not have read the articles he professes to reply to. I may here state that I do not believe in advantages gained by "stealing a march" upon an opponent, whether it be at a sacrifice of either the veracity or understanding.

If your correspondent had been so guided, he might have refrained from exercising his powers of imagination in raising points to answer, and laying them to my charge, with all the apparent sincerity of a Scotch divine. In referring to the first charge, I will ask your correspondent whether, in case of a tunnel being driven for the purpose of intersecting the various seams of coal that happen to be accessible by such an operation, he would advise six separate tunnels to be driven into each of the shafts used for ventilating; or, what would be quite as reasonable, two each of greater capacity than the united areas of the intake or outgoing currents from the six mines? Assuming that the air-currents should only be divided into two divisions in each set of workings, it would be requisite to have each of the tunnels twelve times the area of one air-course that would pass the working faces. The case I have referred to is not one arising from the fancy of the brain, intended to suit my position, but one that has come under my own observation. It would be almost as unfavourable for your correspondent's position were I to pursue the enquiries a little further; however, from the opinion I entertain of his abilities, I do not consider it necessary to say more in order to show him the difficulty of putting his theoretical principle into practice. My remarks respecting the size of the air-courses at Mostyn Colliery could not be construed as being meant for "M. E.," except by the same process that he arrives at the conclusion that 25 ft. is the standard I fix for air-courses. What I have before stated I again repeat—that in some mines it is not practicable to maintain air-courses 5 feet square; and if "M. E." had had very varied experience he would, in all probability, not have questioned the statement. In a colliery under my management the least of the air-courses are far larger than the size referred to, whilst some are far more than double. The statement made by me respecting the inadequate number of shafts, and the miserable system of dividing a shaft by bratticing, to serve for both upcast and downcast, is quite as correct after the allusion of your correspondent as before. If he can show me that I overrate the mischief inflicted upon the whole mining community by the evils I refer to, he would confer a favour upon me, and at the same time show to the public at large that no evil is too great or glaring to be given up without a struggle.

With regard to the mechanical and other means of ventilation, I can only observe that I am not desirous of following "M. E." through the mazes of his metaphorical expressions any further than is necessary to enquire how long the probationary period of the mechanical means of ventilation is likely to extend over, and whether the ordinary period from childhood to manhood is not likely to be exceeded before the advantages become so evident as "M. E." contends they will do? And whether, if the loss of life and property continues upon the same scale through the probationary term as through the past year, the cure will not be worse than the disease? I am quite as desirous of seeing the report of Messrs. Dickinson and Atkinson's labours as "M. E.," and also to see what steps will be taken to urge the use of the most effective system being employed if the furnace should be found inadequate in exceptional cases. If my recommendation of the combined powers of the steam-jet and furnace had been unconditional, or I had failed to show the reason why I so recommended them after repeatedly giving my adhesion to the furnace, then I could have understood the necessity for making the remarks that "M. E." has done; but I have never stated that the furnace and jet combined were more effective than the furnace, any more than I fixed the standard of air-courses at 5 ft. square.

Dec. 23. Jos. Goodwin.

VENTILATION OF COAL MINES.

Sir,—I feel much pleased to find the remarks of "M. E." in your valuable Journal, and lose no time in answering his queries. The importance of the ventilation of coal mines is of such magnitude that I almost fear I shall not be able fully to express my ideas in a tangible form, being an uneducated man. In the sincere hope that scientific and practical gentlemen will take the matter up on its merits, I at once proceed to give my opinion of the strata of inflammable gases in coal mines. Carburetted hydrogen gas, left in a quiescent state, will ascend to the high part of a mine, and continue accumulating till it finds its level, when it will underflow and ascend the next highest place, till it reaches the shaft, leaving the under surface as level as a sheet of quiescent water. Assuming this to be a fact, the gas, being lighter than atmospheric air, will form a stratum quite distinct from the air, in the same manner as water descending finds its level in the lower part of a mine. If "M. E." admits this theory to be correct, I shall with little trouble explain how the light gas can be taken out of the mine as fast as it is evolved. Supposing a large reservoir of water were required to be drained, and it was found that cutting a drain through the solid earth would be too expensive, a question would arise as to the most economical plan. One would say, erect a powerful engine, and pump it out; but would it not be much the best and easiest way to put in a syphon-pipe, exhaust the air, and the water would flow out by the pressure of the atmosphere as fast as it accumulated. My plan for exhausting gas from the coal mines is *the syphon inverted—it is one of Nature's unerring laws*, and if properly erected *needs no mechanical appliances*. I shall now endeavour to reply to the enquiries of "M. E."

1. "Goafs—are they to be walled up?"—No; goafs, being large receptacles for gas, ought at all times to be subject to the supervision of the fireman.

2. "Does he propose placing the pipes at the highest level of the goafs?"—I do not think it absolutely necessary to place the pipes in the highest part of the goafs; for, as I before said, the gas being a level surface, the pipe may be placed at such a height that it may be exhausted—say 10 feet above the roof at the face of the work, or out of reach of the workman's candle; and my opinion is that the pipes may be removed as the displacement of coal takes place—bearing in mind the safe level of the gas.

3. "Does he propose putting a separate pipe in each goaf, or having branches where possible from one or more mains?"—I propose having one main to each heading, with a branch to each reservoir of gas, with suitable valves, so that each reservoir may be exhausted in its turn, or as fast as any gas may be evolved.

4. "Of what thickness, area, and material does he propose the pipes to be?"—This question, I am sorry to say, I am unable to answer (being one of calculation), for the reason before given, but would feel obliged if "M. E." would kindly inform me how fast gas (being lighter than air) will travel through a 2-inch pipe, or other area of its own levity, without pressure. Suppose a reservoir were to be emptied containing 10,000 cubic

feet of water, in what time would it flow out of a 2-inch syphon by the pressure of the atmosphere?

I have made a working model of the exhausting apparatus, and found I could exhaust 10 cubic ft., with an ½-in. pipe, in 10 minutes, by its own levity, *without any pressure*. The vessel was filled with gas, which had to descend 25 ft. and ascend 29 ft., only 4 ft. above the level of the gas, thus proving that gas may be brought below its level. If the ascension pipe were 20 or more feet higher, the gas would flow out much more rapidly; for instance, a balloon, the higher its elevation, the greater velocity is attained. As to the thickness and size of pipes, I think a 4-inch pipe would clear a mile; a 6-inch pipe would clear three miles; the material need not be heavy (say) gas tubes, which could be laid cheap. I must here remark that the quantity of gas evolved in a mine cannot be large, for it is the accumulation of years makes it so deadly in its effects. It will take 1 ton of ordinary coal to make 7000 feet of gas, and that multiplied by 13 will make 91,000 cubic feet of explosive mixture, equal to as many feet of gunpowder; to take 7000 feet of gas would not require a large area.

5. "By what means does he propose to keep the current in motion in the pipes?"—By exhausting the atmospheric air out of the pipes leading into the reservoir of gas, particulars of which may be seen in my specification of patent taken out in Dec. 15, 1860. Remove the atmospheric air from the pipe, and the gas will flow to the end of time, if no accident occurs to the pipe.

6. "Does he propose any permanent exhausting mechanism, the effect of heat applied externally, internally, or at the exit pipes?"—None whatever; neither is any heat required. I have specified in my patent that heat *may* be used to expedite the rarefaction of the gas, but it is not absolutely necessary.

7. "Or does he propose the upper extremities of each of the pipes at its termination in the goaf or reservoir to be kept constantly, as it were, immersed in gas?"—My plan is that both the inlet and outlet pipes be constantly immersed in gas—[see my patent]. I have endeavoured to give the answers required by "M. E.," and I sincerely hope that if there are any which are contrary to his views, something may accrue from my remarks that may lead to *some* plan for the safety of the miner. J. G. WILLIAMS.

Blaenavon Gas and Water Works, near Pontypool, Dec. 23.

SPECULATION ON THE ORIGIN OF GOLD.

SIR,—The association of gold with Trappean rocks, and the fact that it is never found in any other form than that of the pure metal, led me many years ago to conclude that there must be some peculiar condition not yet ascertained, and which, when discovered, would explain the phenomenon. Various metals of a peculiar character, as platina, rhodium, &c., being also associated with gold, would seem to imply a common origin of conditions for their production. Now, we know that a *metamorphic* rock is not a *fused* rock, and that substances at a certain or moderate degree of heat exhibit very different results to those subjected to a more intense degree—say, fusion. The idea that granite has been thrown up in a melted state will, I think, be soon given up; and I see by a letter of Mr. Evan Hopkins, in a *Mining Journal* of last June, I think, that we are likely to have some new ideas given us respecting the granite and gneiss formations; and the fact of the quartz in granite being found in more or less transparent crystals, is proof, I think, that the heat has not been so intense as hitherto supposed, as it is well known that great heat renders quartz opaque.

The matter of which the volcanic rocks are composed, and which is supposed to exist below the granite, may have heated this peculiar (conglomerate it might almost be termed) substance in the same manner as it has acted on crystalline limestone. Trappean rocks are generally supposed to be produced by heat and pressure, and as having been ejected beneath the ocean, or overlying strata, in most cases likely excluded from the atmospheric air. I have seen a piece of clay subjectad to an analogous process, and the result was an exceedingly hard slate-coloured stone, requiring smart blows of a hammer to break it, and which cut glass almost equal to a diamond. For some years past a much-lamented and respected gentleman in South Australia has been impressed with the idea that he had made a discovery in connection with the smelting of metallic ores, and which might be turned to practical account. He commenced a course of experiments with a very primitive furnace apparatus, and succeeded in proving his principle, for which he took out a patent in this colony; but before he could complete his experiments in detail he was, unfortunately, cut off by the hand of Death. The gentleman I allude to was the late Captain Richard Rodda, of Penrice, near Angaston. His son, Mr. Rowland V. Rodda, returning to this colony shortly after his father's death, seeing that something practical would result from the new process, carried out similar experiments, with a rather more efficient apparatus, and with the information collected from parties employed in the process by the late Cap. Rodda, succeeded in producing the same results. The end of it was, that the Yatala Smelting Works were taken by him and other parties to carry out the experiments on nearly a model scale, and a fresh patent obtained, generally supposed to supersede the old one, although it appears the original has to be purchased to admit of the later one being exercised in South Australia. I believe, however, that the patent of the late Capt. Rodda is quite as valuable and efficient as that of the son, although they are "said to differ." I have had specimens of metallised ore from the late Capt. Rodda in my possession. I consider the late Capt. Rodda most decidedly entitled to the merit of the discovery. The conditions of the production of the metal from the ore are, that the ore is placed in a furnace of such a construction as to admit of the ore (previously mixed with carbonaceous matter—say, half charcoal and half ore) exposed to heat, but excluded from atmospheric air, or, more properly speaking oxygen, from whatever source derived. The gases contained in the ore stone are driven off, and thus reducing the stone to about half weight, and the copper is metallised in the stone. By raising the heat the metallic particles combine in a more or less globular form, and the copper can be easily crushed out and washed, when it is in a purer state for refining than that produced by the old process. Instead, therefore, of the intense fusing heat of the old system of smelting, it can be very considerably reduced. Here we see that a stone containing a metallic base is subjected to heat, and excluded from the atmosphere, thus producing the pure metal; and, singularly enough, the nuggets of copper ore are in many instances exactly similar to those of gold, and even some of the beautiful frosted appearances are common to both. Whether the carbonaceous gem, diamond, usually found with gold deposits, has been in any way connected with such, under any of these conditions, may be worth thinking of, and is yet to be determined by others who have more time and means at disposal to carry out such investigations.

Penrice, Angaston, South Australia, Oct., 1861. H. MARSHALL.

THE GEOLOGICAL FORMATION OF THE EARTH—No. XII.

SIR,—Knowing the stress laid on these points, as to these elvan courses being conducting pipes from interior fire, I am bound to carry it still further, by stating that sections must be produced to show the position of these lodes or dykes to the strata, when I feel convinced that all who understand such subjects will see the thing in a new light to that represented in all the works compiled by the Plutonian body. To open the way for discussion, I will here endeavour to place a section before your readers in as clear a light as I possibly can in print (without a real section), by supposing one of these dykes or elvans to come up from some place in granite 100 feet wide, it passes through the first bed of slate 200 feet, diminishing in width to 50 feet; in the next layer of 100 feet it was reduced to 10 ft.; in the next 100 ft. it became only 1 ft. wide; and in the next 100 ft. it became only a few joints in the overlying rock; in the next 200 ft. it enlarged to 50 ft., and in the next 200 ft. it again became 100 ft. wide, where it overflowed the land for ½ mile; these lodes dipping at the angle of about 30°. Your readers can now draw their own sections, and surmise how this mass of matter got up through from below in a day, though they may not be generally aware these dykes are formed in this manner—practical men are; they all know these elvans and lodes to open and close as I have stated. They often split up, and at times sharpen out almost to a point, leaving only a few open joints; passing on they reappear at a quarter, half, or even a mile on—magnesian limestone often forms like lodes, in precisely the same manner. To the Plutonians I think it must appear unaccountable how the melting mass passed up from the cauldron through these small joints or fissures, and opened again to let out a sufficient supply of melting matter to overflow a whole district. They have not shown one of these close joints in their beautiful (but imaginary) sections, exhibited at the Polytechnic Hall. Will they explain how the large crystals in the upper portions passed through the small joints? I think it useless to prolong my observations on the origin of these elvan and hornblende dykes; still I feel bound to say a few words in reference to the views of my friend W. H. Salmon, as expressed in the pamphlet before mentioned. It is a well-written introduction to the metamorphic system, showing that all was once in a placid state, and I believe that when the land was under water, and all the layers were forming and undergoing active chemical changes, they must have been all more or less in a placid state. I believe even the granite to have been so; the mountain lime being in such a state I may say is almost a certainty, as its weight, after the water subsided, appears to have caused it to fall off to the lowest ground, leaving chasms or open fissures, generally known as swallows. If this rock was in a placid state we have good grounds for supposing all other rocks the same, and that the part was which came up from below to aid the ocean in forming every new layer, must certainly prove that the under layers were chemically acted on, and it is not unlikely they were once all in a placid mass: who can say it is not so at the present day, particularly under the ocean, where I can show new rock forming. I have stated before that rocks soften as we descend, consequently we must take another view of it. The substances thrown off from below to aid new layers must ultimately have reduced it, and caused a subsidence of the new layers; thus we find coals nearly flat, though they are in almost every instance found to beat a little down, not up, as they should have been by the Plutonic law, this subsidence would cause placid matter from below to force its way to the surface, in what may be called (using the miners' term) a liquid or puddle water, and in this manner the substances forming these hornblende lodes would rise fast enough to crystallise and keep pace with the other layers, or even to overflow them, or even to raise almost mountains under the sea. Your readers will bear in mind my opinion is not that all the bottom of the sea was ever level, far from it. The sea, by its contents and weight, together with the new layers acting on the decomposing layers below, must have caused immense quantities of silicious substances to force their way to the surface, and form the upper caps of hills. It appears as if at this period the earth was all but exhausted in the supplies for forming new layers, with the exception of silica and hornblende, as the hornblende tribe of rocks then appears to have accumulated in all but mountains. If these substances were sent up of the consistency of foul or puddle water, and crystallising after, they would in time form mountains much superior to what we now find them.

The basaltic formation was one of the earth's latest acts. About this period the earth apparently lost its balance, so as to cause the water to change its place. No doubt such was arranged at the creation, and was probably one of its needful working laws. No one doubts a great rush of water once having passed over the earth; I say a rush of water, as it is evident it did not rise on all parts of the earth gradually; if it had, no great disturbance would have taken place. It was evidently a mighty rush of waters, that must have rolled on like mountains, sweeping before it portions of the highest hills, and in such an agitated state as to hold every substance suspended sufficiently long to act by the law of gravitation. The mineral jigging machine, now so commonly in use by man, is only an emblem of how the water on the earth then held the balance of substances, leaving an everlasting memorial for man's guide. Any practical man, either at home or abroad, when standing in a mining district, can say where the waters of that terrific deluge deposited the tin, as it was swept from the veins in the mountain side. If he goes to Australia he sees at a glance where the rushing waters have deposited the mountain gold; in fact, the law is the same in all parts of the world. I have in one or two instances been where it has been a little out of place in tin deposits. Where two layers or two subsidences have taken place one over the other, but the lowermost deposit has generally the bulk of the metal; at Ballarat there appears to have been two subsidences of gold. It is said by some the earth underwent two convulsions; such was not necessary; to cause the second deposit there might have been a moment's pause, and the metal subsided, when a back placid mountain might have given way, and let on a second or even a third rush of water, each bringing with it a little gold or tin, and not disturbing the first settlement. These convulsions of the earth evidently brought the mountains down, and deposited their contents in the valleys and seas, which have since combined with the oxide of iron, sent up from the interior of the earth, and formed even new layers of rock; it has done so between the two gold layers at Ballarat. All these latter layers are commonly called silt or stilt layers; to practical men they are well known to differ from those formed under the ocean.—*London, Dec.* 26. NICHOLAS ENNOR.

MINING IN SPAIN.

SIR,—I have just received the Journal of Nov. 23, and as I do not wish to contend with one who insists on having his own statements considered correct, I shall decline further correspondence after this on the subject. The deposits do underlie towards the valley, and not under the hill. I say again, without fear of contradiction, that there is a sufficient supply of water for the number of men named. An able workman can break and wash 10 tons of stuff per day; and if the deposits are continuous Mr. Ennor would be puzzled to find one in Cornwall equal to the Beariz tin works. No such machinery as he talks about will ever be wanted, for levels from 10 fms. to 100 fms. can be driven to intersect the deposits at a comparatively small outlay. The price for removing the overburthen is the business of one who is able to calculate it, and as that is alone with him, I should consider myself foolish to interfere for Mr. Ennor's gratification. I shall conclude by remarking, that as all speculations are not certainties, the result remains, as in other mining properties, to be proved. A CORNISH MINER IN NORTH SPAIN.

Spain, Dec. 12.

THE GREAT MOELWYN SLATE QUARRIES.

SIR,—I promised to send my candid opinion on any slate quarry in Wales I might chance to visit; therefore, after viewing several, I select for my first slate essay certain progressive works, situated about 2 miles north-west of Festiniog, and within 3 miles west-south-west of Lord Palmerston's profitable concern near Tangressi, in Merionethshire, styled the Great Moelwyn Slate Company, limited, and consists of a capital registered to calls equal to 50,000*l.*; yet, after about 30,000*l.* purchase money, &c., have been expended, the concern then will stand on a par with any in Wales, because an abundance of the finest materials for roofing slates are there; consequently, when the levels, inclines, &c., now being worked out are completed, and its never-failing supply of water power put in full operation to work suitable machinery, it can only be by the worst management if the said company do not nett at least 15,000*l.* per annum, or a yearly income equal to 50 per cent. on a judicious outlay. I have seen no quarry that can be kept working so advantageously or economically for ages to come, as the whole valley between the Moelwyn Bawr and Moelwyn, Mawr consist of an immense bed of slate-rocks, upon the working average about 300 feet perpendicular thickness above the level of a deep and overflowing lake to the upper trap that protects the lower vein, which stone roof dips in the mean about 38° to the north-west, thereby running through the centre of the Moelwyn; while another vein of most excellent slate can be systematically worked out under the south side of the Great Moelwyn, sufficient to employ hundreds of hands for centuries to come, unless the allwise Creator deems it meet to check man's future revealings there, or men themselves frustrate the very gifts Nature so abundantly supplies for their future agreements or disagreements, since it oftener lies more with mortals themselves to develope natural productions to profitable heritances than any other causes; for although the bounties of this world are unlimited, yet the limited ideas of some men oft check the gifts of Providence from being brought to light. For, like most slate quarries I have yet witnessed, I find the Great Moelwyn Company's operations were began at the very place they ought to have ended—at the top of the south end of the Little Moelwyn, directly under the trap; consequently, the present company showed great wisdom in abandoning the excavations made by their first quarry manager, after incurring nearly 2000*l.* expense, without reaping the least benefit, since not one natural advantage could ever be brought to bear on its future workings; therefore, the present manager showed sound practical knowledge when he began to open an adit within a few yards of the only lake, some 500 feet below the first-made useless excavation, and continued to open a dozen similar entries nearly equidistant in horizontal separation and vertical altitudes, till in the end one continuous line of rail will form the levels and inclines to receive the contents from every chamber, thereby constituting such a continuous connection, not to be surpassed in simplicity, economy, and usefulness, and the only works I have heard of where trucks can run from the level floor of any tunnel direct on the contiguous parts of a long steep incline, so that one drum can be made to work several intermediate stages, at whatever distance, time, and rate any set of workmen demand, without in the least interfering with each other. It is, therefore, hoped no narrow-minded directors or unforeseen difficulties will tend to cramp the future welfare of its present prospects, embracing so many natural advantages, waiting to be scientifically developed. In fact, it would be difficult to conceive how any other slate locale can be made to work more profitable for ages to come than the Great Moelwyn Company's intended operations; for the upper or north vein alone is capable of furnishing many million tons of the best roofing slates; while the lower bed, if dug out within half-a dozen yards of the lake level, can supply several millions more; and then future generations can, by merely driving an adit level, with the intended mill site (through a natural mineral vein of disrupted earths), be able to take out more and better slates than their forefathers, because the deeper slates are extracted the better their texture, &c. Then, again, although it seems anomalous that speculators in the Little Moelwyn's interior should have styled themselves the Great Moelwyn Slate Company, yet the same title will be perfectly consonant when the said company begin to operate on that side of their grant underlying the Great Moelwyn itself, and where the best samples of slates will eventually be procured—at least, such is the impression of those who have lately visited the spot, and have formed any opinion on the matter, irrespective of— G. F. GOBLE.

THE SLATE TRADE, AND SLATE QUARRIES.

SIR,—Last week's Journal contains the report of an ordinary general meeting of the Lower Taldrws Slate Quarry Company. This quarry is situated in the Vale of Nantlle, and is in the range of what is now called the Bangor Slate Vein, though probably some 10 or 12 miles distant from the Penrhyn quarries, and a shorter distance from Llanberris, and close in the neighbourhood of all the Nantlle quarries, of which it is one. The first indication, found several years ago, was a small piece of a narrow vein, which had been considerably further unheaved than the adjoining rock, and which produced a quantity of nice marketable slate; so, taking for granted that all around was similar, the shape of a quarry was marked out, and quarried to the depth of some yards, at very considerable expense; a steam-engine, incline, and winding apparatus made—in fact, the engineer, or some one, seemed determined to make a quarry, whether slates were there or not; and the same determination seems still predominant, as witness this very satisfactory report:—"By work already done, the first 3 yards of depth may be estimated to cost 1s. per cubic yard. Next, 13 yards, including lifting, should be estimated at (say) as much again, 2s. per cubic yard—2900*l.* as cost of ridding; after which the next 7 yards in depth of slate rock may be estimated to yield (allowing two-thirds for waste), and 1¾ ton of slate per yard, 8165 tons of slates. From the nearest data that can be obtained these will cost getting per ton (say 22s.) 8980*l.*; present value (say 38s.) 15,514*l.*, leaving a margin of 6534*l.*, against an expenditure of 11,880*l.*, including top ridding."

To show the futility of such a calculation, I need only mention that the test depth in the celebrated Penrhyn Quarries scarcely ever yield 1 ton of marketable slates for 5 tons of rock, and some of the worst depths not more than 1 ton of slates for 40 tons of rock; and in this I do not include the surface top depth, which scarce gives a percentage, and the average of the splendid Nantlle Quarries will not exceed 1 in 20. And upon what data does Mr. G. L. Fuller, C.E., calculate solid slate rock at so much less depth than his neighbours? and of such superlatively superior quality to any rock ever found in this part? or by what means does he calculate to get any slate at either 13 or 16 yards in depth? It cannot be by rule of three, the improvement being too imperceptible in the older working, and there is nearly 12 yards of clay on the new trial. The insinuations about the other quarries having some time ago been in the same predicament is a curious way of helping a lame dog over a stile, and certainly cuts both ways. If Penrhyn Quarries have 60 feet depth of soil, Llanberris 90 feet, and Cloddfaion 150 feet, without a single slate, what must Lower Taldrws be is about the question.

However a body of gentlemen could listen to such a report and call it satisfactory, or how Mr. Fuller could expect local business men to pass such statements unnoticed, transcends my comprehension. After all, I shall not be surprised to see a good slate quarry in Lower Taldrws, bad as the present aspect is; but the mode of proceeding must be altered, and the board gentlemen had better limit their duties to scrutinising the accounts, and leave the command of the quarry to one responsible party.

We have a natural anxiety that the newly-formed companies should be fairly and judiciously worked, that the Slate Trade may not harm thereby, as there are many promising places kept back for want of capital, while capital may be lavished, if not on worthless places, without judgment. The price of slate advanced 10 per cent. on many sizes in November, and the demand is far in excess of the supply. Opening a quarry is a very tedious and expensive process, and the ground ought to be well proved in depth, before commencing surface operations, but the very reverse would appear to be the rule. Go at it heading, open out right or wrong, plenty of money, without contemplating what may be the result of failure.—*Carnarvon, Dec.* 24. B.

THE PROPOSED RAILWAY FROM YORK TO THE TEES.

SIR,—In communicating my previous suggestion, I only gave one part of the advantages to be obtained, but the benefit would be general—to have a railway from York to the Tees: on account of the North-Eastern Railway Company monopolising the North Riding the goods traffic in some instances has risen 50 per cent.; but we must also take into consideration the coal traffic—for instance, when the North Yorkshire and Cleveland Railway was on the tapis the promoters said we should have coal merely at a nominal cost, as cheap, indeed, as the Crow seam in our own neighbourhood. Calculate for yourselves, says Mr. E. W. Jackson; the running toll will be ¼d. per ton per mile for those good north coals [when shall we get them?], the coals at the Stokesley station being at the rate of 13s. 6d. per ton. Now, if the Stockton and Darlington had a direct line as proposed, and a common running toll, they could deliver coal with profit 30 miles down the proposed line for less money; and, as a proof that something is not right, it may be mentioned that coal is brought from Stockton by the common cart. Then, in the case of lime, if coal were brought into Bilsdale at a reasonable rate lime could be burnt and forwarded into Cleveland at from 7s. 6d. per ton, which would be a cheaper and better lime than any got from the strong clay soils. Then, Mr. Editor, who is to make this line? Will the Stockton and Darlington, and the London and North-Western? No doubt; but they would find an opponent in the North-Eastern. The public, however, would see the advantage of the new route, and would support it, therefore I beg to suggest, through the medium of the Journal, that a deputation be formed from each company to view the proposed line over, and then I have not the least doubt but they will consider the matter in the same light as your correspondent. A WELL-WISHER.

Northallerton, Dec. 24.

MINING RETROSPECT—EAST CARN BREA.

SIR,—The excellent article in last week's Journal, in which a comparison is drawn between East Carn Brea and East Caradon, appears to me to be so well founded and to be so useful, that after expressing my obligation to you as a shareholder, and acquainting you of the fact that in our locality it afforded every true friend of mining gratification to see our district so prominently noticed, I venture to draw attention to the reasons that, as a "*Practical*," weighed with me when I risked a large portion of the savings of a life on its issue, and with that issue I am satisfied; and if my humble pen serves to induce others to follow my example, I am confident they, too, will be satisfied with the result.

1. The geology of the ground is faultless—granite, and a junction of clay-slate; and the conformation of the country at the foot of Carn Brea Hill took my fancy, and at the very spot where the rich course of ore is now being worked in the 26 the end is entering the undulating ground, where I expected something good, but certainly nothing like what is now revealed.

2. A block or square of ground, where mines east and west, north and south, had proved rich, could not well fail. The bare enumeration of the company in which the mine in question is found will be enough: 500 fathoms south are the Bassets and Bullers, that within the last 15 years, on an outlay of 2500*l.*, have returned 800,000*l* in dividends. To the north stands Great Wheal Tolgus, that ceased working about 25 years ago, and made the Davey's and other county families. Great South Tolgus, South Tolgus and others, now working profitably, are parallel lodes. To the west, Carn Brea, North, Pool, East Pool, Tincroft, Dolcoath, Cook's Kitchen, &c., that have already paid upwards of a million, and are now paying largely. To the east, Wheal Sparnon, &c.

You give a just criticism on the mine, but fail to mention the side lodes, which have never been seen under the adit, where several of them hold forth quite as good indications as the one now being worked on. One of these, north of the engine-shaft, is expected to be cut daily in a cross-cut now being driven at the 50. On the south, or middle lode, you greatly under-value the reserves. They cannot be estimated at less than 60,000*l.*, and are being augmented at the rate of 6000*l.* monthly. The 26 end is now clear of the cross-course, and worth 60*l.* per fm. The 30, east of the western shaft, is worth 35*l.* per fm.; the 40 east worth 45*l.* per fathom; the 50 east worth 15*l.* per fm.; and the 50 west worth 20*l.* per fm., and improving. I have stated facts; time will show what East Carn Brea will do.—*Redruth, Dec.* 23. L.

MINING—NECESSITY OF CAUTION.

"THEY HAVE CUT THE LODE; IT IS NOT WORTH ANYTHING: SELL YOUR SHARES."—DON'T.

SIR,—Many speculators in mines will recall to their memory the heading to this letter, and a great number of them, I have no doubt, have been foolish enough to listen to the advice of interested parties respecting the disposal of their shares, simply because *a lode has been cut poor*. If my readers would enquire of any miner as to what a lode is, he will tell them that it is composed of several other substances besides metal, and that some lodes are without metal for scores of fathoms, whilst the richest of lodes have fathoms of ground quite valueless. Now, supposing a cross-cut to be driven from any level to intersect a lode which is known to be near it, and supposing the lode to be a very rich one, must it necessarily follow that when the miner first intersects the lode that it shall be rich? Not at all: he may cut into a part of it that is worth nothing, and it may continue valueless for 20 or 30 fms., when he may quite unexpectedly come to the rich part of it, worth 100*l.* per fathom. A lode must never be despaired of until it is driven on for at least 20 or 30 fms., particularly if the mine is in a good district.

Let my readers (that is, those who know nothing of mining) look at one of the walls of a room, and consider it to be the lode; let there be hung on the wall a painting at each end and one in the centre. The paintings shall represent the metallic parts of the lode, whilst the spaces between them shall represent the poor parts of it. Now, let my reader stand in the middle of the room, and point a stick towards one of the paintings, and then approach it until the stick touches it. If the cross-cut had been commenced through the earth from where my reader stood, in the direction he moved the stick, he would have intersected a rich part of the lode; but if he had stood in a part of the room where the stick would have approached the bare wall, he would in like manner have intersected a poor part of the lode. In either case the miner cuts quite through it, and then drives to the right and left.

The above illustration will show how foolish it is to dispose of shares at a great sacrifice, simply because a poor part of the lode is first intersected. As before stated, the adventurer should wait until the lode has been driven on for 20 or 30 fms.; it will then be quite soon enough to sell. I will now mention a few mines in which cross-cuts have lately been driven to intersect lodes.

In EAST CARN BREA they have been driving a cross-cut from the 50 fm. level, to intersect a lode which has proved to be very rich in the level above. It was reported that the lode was reached, and of very little value. Many sold their shares at a sacrifice. Now, I have no doubt but that when the lode has been driven on a few fathoms further it will turn out to be richer than in the level above.

In WEST POLMEAR a lode has been lately intersected poor, and, as usual, the shares have had a great fall—from 15s. to 6s. Whoever has parted with shares at the latter price has not acted very wisely, for the lode just intersected is one of the Polmear rich lodes, and the probability is that when it has been driven on a few fathoms it will prove to be rich, in which case the shares will have a great rise.

In WHEAL GRENVILLE, in the 80 fm. level cross-cut, the lode is daily expected to be cut. I hold above 100 shares in this mine, and shall not be at all alarmed should the lode be cut poor. When it is driven on east and west for 10 or 15 fms. each way, without meeting with a rich part of it, it will be time enough to despair, but certainly not before.

Let speculators in mines well consider the contents of this letter, and not be frightened out of their shares by interested parties; and let them remember *that the richest of lodes are valueless in some parts, and that there is as great a chance (even greater) of cutting into a poor part as a rich part of a lode.* A FORTUNATE SPECULATOR.

THE WEATHER PREDICTIONS.

SIR,—I perceive Mr. George Shepherd still continues to publish his "predictions" in your columns. His last prediction is certainly a startling one—"cold, winterly weather" in January! What sane man, I wonder, would think of predicting anything else, seeing that nine years out of ten January is the coldest month? The second week in January is the coldest of the year on an average of 90 years, as every schoolboy knows. Will Mr. Shepherd be so good as to say *where* the "gale" occurred that he predicted for the 18th, and which he tells us was "strictly fulfilled?" I have now before me returns from every part of the kingdom, from the 16th to the 21st inst. inclusive, and *no mention whatever* is made of a gale. In fact, the last week has been remarkable for absence of strong winds. If Mr. Shepherd cannot give me the information I ask, I must consider it another addition to the many instances in which he has taken credit for fulfilment of his "predictions," when *facts* were decidedly against him.

Church-street, Wolverhampton, Dec. 23. JOHN THRUSTANS.

SPECTRUM ANALYSIS POPULARLY EXPLAINED.—Some few months since we referred to the discovery by two eminent German chemists—Messrs. Bunsen and Kirchhoff—of a mode of analysis by means of which the existence of a metal in a mass of ore could be determined, although the quantity contained should not exceed the one-hundred-millionth part of a grain. One of the earliest results of the discovery was the detection of two new metals, which have been named respectively cœsium and rubidium. Hitherto the wonders of this novel power of research has been confined to the learned, no attempt having been made to describe the discovery in so popular a manner that its utility and beauty should be appreciated by the world at large. At the Polytechnic Institution, however, Professor Pepper has undertaken to open a great scientific treasure to the visitors to that establishment, to which we have so frequently alluded as offering the best possible opportunity of acquiring amusement and instruction simultaneously; he has arranged to lecture "On the magnificent field of discovery opened out by the new terrestrial and stellar chemistry and experiments of Professors Bunsen and Kirchhoff." It is well known that there exist in the solar spectrum what are improperly called rays—effect produced by the interruption of the luminous action. Messrs. Bunsen and Kirchhoff have discovered that metals and their compounds placed in the centre of a flame forming the luminous spectrum, each produces a special and particular ray in this spectrum. As for example, sulphate of soda, chloride of sodium, and carbonate of soda, interposed in the flame of coal gas, whose light is disunited by means of a prism, discovers to the sight in the spectrum formed by this prism brilliant yellow rays. The compounds of lithium form two rays, the one yellow and very weak, the other red and very brilliant—every metal giving different results when tested by this optical examination. With the electric light the results obtained are much more marked and reliable, and the resources of the Polytechnic Institution enable the experiments to be shown in all their splendor. Professor Pepper's exposition of the theory upon which the analysis is based, and of its practical application, are perfect; the assistance of Mr. Ladd, whose experience as a working lucernal analyst has enabled him to construct a very ingenious spectroscope, aiding the lecturer materially in making it so. We shall take an early opportunity of referring more in detail to the subject of this lecture. This lecture on spectrum analysis forms but one of the numerous entertainments offered for the holiday folks—not the least attractive being the pantomime of Mother Goose, with full scenic effects, performed en-

tirely by phantasmagoria. Another entertaining lecture is that entitled "First steps in science for young philosophers," by Mr. J. S. King; but of this and several other lectures we must speak upon some other occasion.

COAL MINING IN SOUTH AUSTRALIA.—In a country rich in copper and lead the advantage of an abundance of coal cannot be overrated, it will, therefore, be gratifying to learn that not only has coal been discovered in South Australia, but a company with a capital of 7500*l.* in 1*l.* shares has been formed for working it. The success of the South Australian Coal Association would be hailed with joy by every well-wisher of South Australia, and by no one more than the metallic mining companies, as cheap coal would enable them to make much of the ore now comparatively worthless marketable and profitable. The estate which it is proposed to work is situate in the island of Hindmarsh, and has been carefully inspected by Mr. G. A. H. Thurean, who enjoys a fair reputation in the colony as a practical geologist; he reports that the surface strata composing the island are of recent origin, and consist of those residues so very common with freshwater courses. The coal already discovered rests on a coarse calcareous grit, not very compact, but sufficiently indicative in its nature of composition to prognosticate other beds of coal resting on these formations. The coal itself is in a seam from 1 to 4 in. thick, and seems to be distributed as a regular deposit over an area embracing more than half the island, and part of both banks of the river. During his whole survey not one circumstance occurred which would have altered his favourable impression as to the existence of coal measures there.

THE PROGRESS OF MINING IN 1861.

BY J. Y. WATSON, F.G.S.

BEING THE EIGHTEENTH ANNUAL REVIEW.

I stated in my last Review of the Progress of Mining Adventure that the year 1860 had been an exceptional one, not only in connection with Mining pursuits, but in its general characteristics, and in its commercial phases. The dull state of affairs which had then to be remarked upon had been brought about by political considerations; by wars and rumours of wars abroad, and by an unexampled continuance of wet weather, which at one time threatened the destruction of the harvest. There was also towards the close of the year an uneasy feeling abroad generally, and capitalists hoarded their money rather than employ it.

At the opening of the year 1860 mining had appeared under very favourable circumstances. Metals were at high and remunerative prices; the prospects of the mines were good, and increased attention was paid to them; but the circumstances of the country to which we have just referred had the effect of depreciating metals and stopping speculation, and the year, as a whole, was one unfortunate to the miner, and singularly barren of any good discoveries.

In coming to the year 1861, we find many changes, and many disappointments also. The political horizon has not been clear, and notwithstanding the general abundance of money, business has not been brisk, or mining very prolific in discoveries or in profits. There have been periods of great excitement in respect to one or two mines, but they have not continued long, nor have they been productive of much lasting benefit. It was a complaint of last year that Cornwall and Devon were singularly barren in new mining discoveries, and it has been the same this year. A great many new mines have been put to work, and large calls have been required to carry them on, but good results are in abeyance, and it may be left for us in 1862 to chronicle the prizes.

The great mischief in new mines is, that under the Cost-book System sufficient capital cannot be, or is not, raised at the commencement of the works for the proper development of them; and the consequence is that those who, from the inducements held out to them, and from the expectation of early results, embark in a large number of shares find themselves subject to periodical calls which they never anticipated, and for which they are not prepared. This is the crying evil of mining, and one to which much of its dullness and unpopularity is owing. In all future companies capital ought to be raised for twelve months' work *at least;* and those who embark in them would be able more easily to calculate their liabilities.

Early in the year there was a very active business in mining shares, and a considerable rise took place in many of them; and, singularly enough, when in February the Bank of England raised the rate of discount to 8 per cent. the Mining Market was in, and for some time continued to be in, its most active state. And, by way of contrast, when in November the rate was reduced to 3 per cent. the market was more depressed than it had been during the whole year, or even for many years.

To account for the anomalies of mining is more than I can pretend to, but it has become obvious to everyone that disappointment in most of the young mines (with the heavy calls which have had to be made upon shareholders in consequence), is one of the primary causes of the late depression; while another cause may be found in the "bulling" and "bearing" transactions of the market. Mining is not allowed to stand upon its own merits, but at times is depreciated to suit the "bears"—or those who sell stock in anticipation of a fall; or puffed up, to suit those who are desirous of selling. The market for shares was also particularly affected during the year by the breaking out of the civil war in America. The Americans have been our best customers for tin and copper, and both these metals declined considerably, the former nearly 20*l.* per ton, and this made a serious difference to mines selling 40 or 50 tons per month, and affected all mines more or less. In July the standard for copper ore, or the price paid by the smelters to the miner for the copper in the ore, declined to 119*l.* 1s. I have often shown the effects of a great decline in copper upon the profits of mines, and may again remark that a mine selling 1000 tons of ore per month, upon a decline of 1*l.* per ton is, of course, affected to the extent of 1000*l.* in that month with very little diminution in the cost of working. The fall in tin also of 20*l.* per ton this year reduced the profits on the tin mines several thousands of pounds, and the whole result is apparent in the fact that only 45 mines have paid dividends this year, to the amount of 245,113*l.*, while in 1860, 57 mines paid 342,462*l.* 5s.

COPPER.—The variations in the trade price of copper have been numerous, and probably not altogether in consequence of supply and demand, since it is well known that immediately after an advance there were free sellers at the previous rate. The general impression respecting smelting of late is that it has been a very bare trade; and this opinion derives confirmation, we think, from the fact of the failure of an attempt to establish a company with an immense capital, having a London banker and a nobleman in the direction. In turning from a reference to the past, we think the future of copper, notwithstanding the warlike aspect, politically, is not without symptoms of good promise for the miner. We understand the stocks of smelters are not large—probable under the average. The immense stock of foreign ores and copper held so long by one of the two large importing houses has been sold during the year, and its unfavourable pressure upon the trade removed. The present foreign stock, though large, is held by a London house of Crœsus renown, who doubtless will do their best to maintain prices and a steady market, for sound commercial principles, and their foreign correspondents' interest, will alike impel to this; and last, but not least, the absolute necessity of a large mixture of home ores for the foreign ensure an active competition in the Cornish Ticketings.

TIN.—We cannot speak of steady prices during this year, as we did of 1860, for numerous changes in price have taken place—at one time, from the highest, the reduction was 19*l.* per ton, but an advance on this has since been made. We cannot, however, complain of these reductions, for in the face of the serious falling off in the demand for tin-plates for America, we consider the miners have been fortunate in not having felt it more severely. There are grounds for hoping the worst is over, and, as soon as American affairs shall assume a more peace-like aspect, a considerable reaction may be looked for, and again a continuance of high prices. The English miner must have noticed with no small pleasure the firm holding of stock by the purchasers at the last annual Dutch sale.

LEAD.—The Lead market almost throughout the year has been very dull, chiefly caused by the falling off, early in the season, in the American demand. In consequence of this the Spanish production began to accumulate, and this reacted upon the English market; and during some months the English smelters had a constantly increasing Spanish stock to contend with. Later, however, a quiet move in the Spanish market was discovered, when it was found that large purchases for New York had been made. This caused a reaction here, and an improvement in prices was the immediate effect; but this improved feeling was but short-lived, for again an American adverse influence came into play, in the Order of Council stopping exports. We look upon this, however, not so seriously as generally viewed at the first blush; for exports may now be made to other countries under bond, and America will draw supplies from the Continent, whilst the Continent will be taking from us; and it is, consequently, only a question of time, with the fact in favour of a war consumption going on in America. On the whole, probabilities point to higher rates.

The following list shows the dividends paid by British mines in the year 1861. In the first column is given the amount of capital subscribed, and in the second the market value per share. The dividends of the previous year are also given, to show the increase or decrease in each mine:—

CORNWALL AND DEVON MINES.

Name of Mine.	Amount paid.	Market value.	Dividend per share.	Total Dividends in 1861.	Dividends in 1860.	Increase in 1861.	Decrease in 1861.
Bedford United	£3¾	£5	12s	£2,400	£2,800	—	£400
Boscean	20½		£5½	1,320	1,200	120	—
Carn Brea	15	80	2	2,000	14,000	—	12,000
Clifford			29l.13s4d.	14,500	16,500	—	2,000
Cook's Kitchen	15l.18s.9d.	29	13s.	1,592½	—	1,592½	—
Cradddock Moor	8	25	1½	1,582½	1,002½	580	—
Devon Gt. Cons.	1	360	42	43,008	48,128	—	5,120
Dolcoath	128	550	47	16,826	21,480	—	4,654
East Basset	20½	52	26	13,312	15,872	—	2,560
East Caradon	2l.14s.6d.	29	1⅜	8,448	768	7,680	—
Frank Mills	3l.18s.6d.		16s.6d.	4,125	—	4,125	—
Gt. South Tolgus	14s.6d.	4½	½	3,000	11,100	—	8,100
Gt. Wh. Fortune	18l.16s.	12	⅛	899	899	—	—
Great Wheal Vor.	2		⅝	3,692½	—	3,692½	—
Gunnis Lake	—		1s 6d	750	—	750	—
Herodsfoot	8½	36	5½	5,632	4,096	1,536	—
Marke Valley	4l.10s.6d.	10	¾	6,750	2,475	4,275	—
New Birch Tor & Vitifer Con.			3s 6d	1,050	—	1,050	—
North Downs	2¼	4½	⅜	2,250	—	2,250	—
North Grambler	4l.4s.10d.		⅛	683	—	683	—
Par Consols	1½	8	¾	4,800	7,360	—	2,560
Phœnix	100			15,000	15,000	—	—
Poiberro			1¼	2,215	5,000	—	2,785
Providence	10l.6s.7d.	39	4	4,480	8,680	—	4,200
St. Ives Consols.	30		25⅝	2,467½	9,165	—	6,697½
Spearn Moor	3l.17s.9d.		2½	700	840	—	140
South Caradon	1¼	315	30	15,360	16,896	—	1,536
South Frances	18l.18s.9d.	115	5½	2,728	7,192	—	4,364
South Tolgus	8	40	3½	1,792	5,632	—	3,840
Tincroft	9	8	¾	4,500	1,500	3,000	—
Wendron Con.	11l.13s.10d.	10	1	1,024	4,096	—	3,072
West Basset	3l. 4s.	14	1l.18s.	11,400	18,600	—	7,200
West Caradon	5	48	10	10,240	14,336	—	4,096
West Fowey	7¼	3	⅛	1,600	2,080	—	480
West Wh. Seton.	47½	290	52	20,800	27,000	—	6,200
Wheal Basset	5⅛	37	13	6,656	12,288	—	5,632
Wheal Bulier	5	80	6	1,536	3,072	—	1,536
Wh. Falmouth and Sperries.	2¼		⅛	1,000	—	1,000	—
Wh. Friendship.	50		5	640	1,280	—	640
Wheal Jane	3½		1	512	512	—	—
Wheal Ludcott	2½	2½	8s	1,920	3,840	—	1,920
Wheal Margaret	10	46	5	4,480	5,376	—	896
Wheal Mary Ann	8	17	2	2,048	4,096	—	2,048
Wheal Seton	107	123	1½	594	—	594	—
Wheal Owles	70		22½	1,800	1,800	—	—
Total				£254,113			

WELSH MINES.

Cefn Brwyno	33		4	800	—	800	—
Cwmdyle Rock	1200		10 p. ct.	120	—	120	—
Cwm Erfin			3½	2,817¾	1,647¼	1,170½	—
Cwmystwith			19	2,432	4,800	—	—
Dyfngwm			¼	750	—	750	2,368
East Darren			6	1,800	2,250	—	—
Lisburne			17	6,800	8,800	—	450
Minera			15¼	27,450	24,525	2,925	2,000
Mount Pleasant							—

ISLE OF MAN.

Foxdale	25		1	2,704			
	15		12s				

ANGLESEA.

Parys Mines			12½	2,500			

IRISH.

Hibernian Min. Co.			1½	1,500			
Mining Company of Ireland			10 p. ct.	2,000			
Wicklow			4⅝	23,125	25,375	—	2,500

DURHAM.

Derwent			5	1,400			

DERBYSHIRE.

Eyam			½	700	1,400	—	700

For the sake of comparison, I give, as usual, the dividends from profits paid on British mines since 1845:—

Year ending 1845, on 18 mines	£215,450	0	0
„ 1846, on 28 „	158,838	0	0
„ 1847, on 30 „	155,381	0	0
„ 1848, on 22 „	129,024	0	0
„ 1849, on 38 „	185,741	0	0
„ 1850, on 42 „	213,570	0	0
„ 1851, on 45 „	216,486	0	0
„ 1852, on 50 „	261,267	0	0
„ 1853, on 60 „	330,755	0	0
„ 1854, on 52 „	317,976	0	0
„ 1855, on 54 „	340,714	3	4
„ 1856, on 55 „	383,418	8	8
„ 1857, on 60 „	386,043	10	0
„ 1858, on 45 „	249,682	15	0
„ 1859, on 57 „	368,363	10	0
„ 1860, on 57 „	342,462	5	0
„ 1861, on 45 „	254,113	0	0

In 1860, 57 mines paid in dividends 342,462*l.* 5s., which was a decrease of 25,901*l.* 5s. upon 1859. This year 45 mines have paid 254,113*l.*, or a decrease of 98,349*l.* upon 1860. The mines making the greatest increase are East Caradon and Marke Valley.

The mines in the Dividend List of 1860 and not in that of 1861 are Botallack, which paid 500*l.* last year; Fowey Consols, 1235*l.*; Grambler and St. Aubyn, 1944*l.*; East Lovell, 512*l.*; Levant, 800*l.*; Tolvadden, 900*l.*; Trelyon, 1430*l.*; Kelly Bray, 500*l.*; North Great Work, 200*l.*; Carn Galver, 95*l.*; Rosewarne United, 512*l.*; United Mines, 1000*l.*; West Fowey, 2080*l.*; Tamar Consols, 3600*l.*; Wheal Kitty (St. Agnes), 1500*l.*; Wheal Kitty (Lelant), 1024*l.*; Wheal Margery, 512*l.*; Carnyorth, 204*l.* The mines in the list of the present year and not in that of 1860 are—Wheal Falmouth and Sperris, which paid, 1000*l.*; North Downs, 2250*l.*; Cook's Kitchen, 1592*l.* 10s.; Frank Mills, 4125*l.*; North Grambler, 683*l.*; New Birch Tor and Vitifer, 1050*l.*; Wheal Seton, 594*l.*; Gunnis Lake, 750*l.*

The fluctuations in shares have been usually great, and I can only refer to a few of them. West Seton shares have been 390*l.*, and as low as 290*l.* East Carn Brea shares rose from 7*l.* to 12*l.*; East Grenville, 16s. to 3*l.* 10s.; East Caradon, 11*l.* to 28*l.*; South Frances, from 155*l.* to 200*l.*, down to 80*l.*, and then to 119*l.* South Caradon, 300*l.* to 340*l.*; Trelawny, from 19*l.* to 11*l.*. and up to 17*l.*; Mary Ann, down from 20*l.* to 9*l.*, and up to 17*l.*; Treloweth, from 4*l.* 10s. to 1*l.*; East Basset, 120*l.* to 60*l.*; Carn Brea, 100*l.* to 80*l.*; Botallack, 190*l.*, down to 150*l.*, and up again to 250*l.*; Tamar Consols, 2*l.* 10s. to 1*l.* 5s.; Tincroft, from 1*l.* 2s. 6d. to 8*l.*; Wendron Consols, 27*l.* to 10*l.*; West Caradon, 80*l.* to 40*l.*, and up to 50*l.*; Wheal Seton, 70*l.* to 130*l.*; Wheal Kitty (Lelant), 17*l.* to 5*l.*; Grambler and St. Aubyn, 26*l.* to 12*l.*, and up again to 20*l.*; Marke Valley, 4*l.* 10s. to 10*l.* 10s.; West Rose Down, 3*l.* to 20*l.*; Cook's Kitchen, 18*l.* to 31*l.* Cwm Erfin, 11*l.* to 20*l.*

In the coming year it is probable that the following mines will enter the Dividend List—East Carn Brea, Wheal Uny, Bryn Gwiog, Drake Walls, Wheal Grylls, Rosewall Hill and Ransom, North Treskerby, and Wheal Hearle.

THE MINING DISTRICTS.

The Mineral Returns of the United Kingdom for 1861 will not be made up officially for some months, but under the head of the different mines will be found the quantities of ores sold by each, and obtained from official sources. According to the Mineral Statistics published under Government authority, by Mr. Hunt, F.R.S., we find from the last annual statement (1860) made up that the metals produced from British minerals that year were as follows:—

Tin	Tons	6,695	£ 871,382
Copper		15,968	1,706,261
Lead		63,525	1,417,415
Silver	Ozs.	549,720	151,173
Zinc	Tons	4,357	89,536
Iron, pig		3,826,752	12,703,950
Value			£16,939,717
Estimated market value of other metals and minerals			170,927
Coals			20,010,674
Total value of mineral produce of the United Kingdom			£37,121,318

TIN is only obtained in Cornwall and Devonshire The highest price per ton was 89*l.* 2s. 6d.; lowest, 30*l.* Average of 1860, 71*l.* 11s. 6d. Cornwall returned 10,225 tons; Devonshire, 175 tons.

In the WESTERN DISTRICT of Cornwall, embracing the mines to the west of Marazion and Hayle, there are 27 mines returning 3070 tons of tin. The mines making the largest returns are—

Providence	Tons 321	£25,483	14 11
St. Ives Consols	293	22,870	4 5
Levant	227	18,138	12 8
Wheal Owles	202	17,223	18 0
Wheal Margaret	219	16,882	7 4

In the CENTRAL DISTRICT, eastward of Hayle and westward of Truro and Cubert, there were 64 mines returning tin: total, 5605 tons; value, 439,808*l.* 18s. 4d. In this district are the mines of—

Dolcoath	Tons 805	£64,974	15 0
Carn Brea	653	47,802	8 0
Great Wheal Vor	233	19,382	13 6
Wendron Consols	223	17,969	16 10
Tincroft	220	16,017	8 11
Cook's Kitchen	186	15,387	0 2
Great Wheal Fortune	181	15,343	9 10
St. Day United	180	13,849	17 11
Great Wheal Busy	182	13,170	9 7
Trumpet Consols	109	9,072	18 8

The EASTERN DISTRICT contains 14 mines, eastward of Truro to the River Tamar, and amongst the most noticeable are—

Par Consols	Tons 303	£23,765	12 2
Drake Walls	176	14,348	9 3
Boscundle	135	10,405	15 0
West Fowey	129	10,313	15 10
Charlestown	69	5,352	14 6

There were also 31 mines selling tin in the stone: total, 376 tons; value, 22,561*l.* 2s. 4d. Amongst them are—

Wheal Grylls	£3975 10 10
North Wheal Busy	3161 16 6
West Wheal Jane	2501 10 0
Wheal Jane	2310 6 5
North Basset	2258 8 6
Clijah and Wentworth	1487 5 8

The DEVONSHIRE tin mines produced 175 tons, value 13,951*l.* 10s. 1d., the chief being—

Ashburton	Tons 111	£8761	13 0
Birch Tor and Vitifer	37	3130	16 8
United Mines	25	1988	11 8
East Gunnis Lake	1	70	9 9

Other mines, both in Cornwall (18) and Devon (5), also sold tin, but were not included in the Stannary returns—

Rosewall Hill	Tons 24	£1926	16 0
North Great Work	8	534	0 0
Wheal Hearle	28	2044	18 6
Redmoor	13	1052	16 4
Bottle Hill	12	966	2 4
New Birch Tor	17	1466	0 0

COPPER.—In Cornwall and Devon, in 1860, there were 113 mines selling ores at the public ticketings—in Cornwall 95, in Devon 18. The total yield was 180,883 tons, of an average produce of 6¼ per cent., and the value of the ore 1,065,376*l.* 13s. The mines actually at work and selling ore were 139 in Cornwall and 21 in Devonshire, making the grand total of 1,071,063*l.* 11s.

In the WESTERN DISTRICT, which is made to include St. Just, St. Ives, St. Erth, and mines south, there were 21 mines, producing 13,464 tons of ore, realising 72,144*l.* 19s. 6d. Among these the principal were—

Great Wheal Alfred	Tons 2533	£13,463	0 6
Tolvadden	2206	11,033	5 6
Alfred Consols	1612	9,019	15 2
Botallack	345	4,724	6 4
Levant	1160	6,210	16 7
Treloweth	1020	4,692	6 3
Pendeen	1249	4,521	1 2

The WEST CENTRAL DISTRICT (Redruth, Gwennap, Camborne, and St. Agnes) contains the richest mines in Cornwall, and 85 of them sold, in 1860, 91,059 tons of copper ore for 532,383*l.* 8s. 1d. Among these, the largest returns were made by—

Wheal Clifford	Tons 9151	£54,029	11 9
West Seton	7121	50,410	3 6
West Basset	9823	45,631	12 7
United Mines	9292	40,324	3 8
Wheal Basset	4159	30,793	0 6
South Frances	3805	26,173	0 6
East Basset	2087	24,275	18 2
Great South Tolgus	3294	23,280	7 6
South Tolgus	2513	20,498	10 5
Carn Brea	3281	15,091	7 7

The EAST CENTRAL DISTRICT includes St. Austell, Fowey, and Bodmin, and 12 mines sold 12,382 tons of copper ore for 90,961*l.* 5s. 11d., the principal being—

Fowey Consols	Tons 4986	£34,513	15 9
Par Consols	3752	33,436	13 3
South Crinnis	1140	6,213	13 10
Wheal Polmear	431	4,732	0 10

This district is also rich for tin, and Par Consols, in addition to the above copper, sold tin to the value of 23,765*l.* 12s. 2d.

The EASTERN DISTRICT, which includes Liskeard and East Cornwall mines to the Tamar, is next in importance to the Camborne: 21 mines sold 26,883 tons, for 189,222*l.* 6s. 11d. in 1860, and will do better in future. Among the richest mines are—

South Caradon	Tons 5229	£51,180	19 4
West Caradon	4021	40,174	12 1
Phœnix	4464	28,494	9 6
Marke Valley	2872	14,260	10 6
Craddock Moor	1455	11,928	7 0
Kelly Bray	1831	7,839	10 6
Hingston Down	1671	6,787	12 7
Gonamena	967	5,522	10 7
Holmbush	459	3,911	3 6
East Caradon	517	3,788	9 4

DEVONSHIRE has the greatest mine in the kingdom, and her 21 mines sold 35,283 tons, for 186,081*l.* 10s. 8d. The principal were—

Devon Great Consols	Tons 21577	£106,170	4 1
Wheal Friendship	1677	15,986	2 4
Bedford United	2481	13,555	19 0
North Robert	1238	9,622	15 11
Creelake	1171	7,327	14 11
East Russell	744	5,731	1 8
Collacombe	1214	5,461	7 10
Devon and Cornwall	1161	4,464	2 10
Lady Bertha	863	3,805	19 9
East Gunnis Lake	787	2,648	15 11
Sortridge Consols	112	583	15 6
Wheal Crebor	153	489	14 2

It will be seen that the Devon Great Consols returned nearly double the quantity of copper ores of any mine in Cornwall.

From the LEAD DISTRICTS, the lead raised in the year 1860 realised 1,236,749*l.* 3s. Lead ore, 89,081; lead, 63,525 tons; silver, 549,720 ozs. The silver realised 5s. 6d., equal to 152,173*l.*

Cornwall produced 64,011 tons of lead ore, which gave 4242 tons of metal, and 180,757 ozs. of silver.

The eastern district of Cornwall is most productive for lead, and the richest mines then on the list were—

	Lead.	Silver.
Mary Ann	Tons 1193	Ozs. 49,632
Trelawny	1251	47,000
Herodsfoot	536	18,750
Wheal Ludcott	589	14,040
Wheal Wrey	650	13,455

These, Herodsfoot excepted, form one group, about Menheniott.

In the Western district, formerly the richest, there were sold from—

	Lead.	Silver.
East Wheal Rose	Tons 607	Ozs. 10,945
Cargoll	489	7,165
South Garras	250	4,770

DEVONSHIRE produced 3018 tons of ore, yielding 2030 tons metal and 53,059 ozs. of silver. The richest mines here are the—

	Lead.	Silver.
Tamar Silver-Lead	Tons 660	Ozs. 29,103
Wheal Exmouth	629	7,895
Frank Mills	767	2,945

Of SILVER ORE, North Dolcoath produced 119 tons 3 cwts., valued at 1449*l.* 7s. 4d.; and Trebiskin and Mount, 5 tons 8 cwts., value 91*l.* 2s. 1d.

Of BLENDE there was returned in Cornwall 4772 tons, of the value of 10,869*l.* 16s. 9d. The largest return was from Great Retallack, amounting to 2370 tons, and realising 567*l.* 4s. 3d.

When these returns of Mr. Hunt first appeared, in August last, I made some remarks upon them in connection with mining and the results of mining enterprise, and they were published as an article in Watson and Cuell's Circular, and as they are well adapted for my present purpose, I shall give the article entire:—

"We need not enlarge upon the importance of these returns in reference to the arts, manufactures, and commerce of the country; our immediate object is to remark that they are the results of mining—of that mining which, from the great advancement in scientific and geological knowledge, becomes day by day more practical and certain. The old Cornish maxim, 'Where 'tis, there 'tis,' led miners in former times to explore ground

and to expend large sums of money, where the experienced miner of the present day would not speculate with sixpence, and thus a great deal of the uncertainty of mining is done away with. There always have been and always will be mines, like Paddy's razors, made to sell, and there will always be money lost by gambling in shares, but we have always maintained that by a division of risks in a sound selection of dividend and progressive mines, not only a large percentage, but a large profit besides, may be obtained on the aggregate amount of investment; and to show this in the clearest possible manner, we give this week the result of an examination into the statistics of the forty-four mines which paid dividends in 1851–2. In the first place, we give the market value of *one share* in each mine, taken from the *Mining Journal* Share List, of January, 1852, and also the value of the same shares in January, 1861, with the dividends paid during the nine years; showing a result, we believe, that few other pursuits on the same scale can show. We would only add, that we have chosen the year 1852 for the commencement of the statistics, because it offers a fair average calculation, but not by any means the best, inasmuch as by taking the dividend mines of that year we have East Rose in the list, a mine which, after paying 50,000*l.* a-year profit for many years, was nearly worked out, and after 1852 only paid 17*l.* 10s. per share; and while in 1852 a share was worth 425*l.*, it was worth nothing in 1861. Several other mines were in the same position, and were we to take them out of the list the result would be far more extraordinary than it is: but we let the good and bad stand together, and give the average. One share in each of the forty-four mines cost in Jan., 1852, altogether, 5451*l.* 5s. In Jan., 1861, ten of these mines (in the position of East Rose, before referred to, and which in choosing an investment would not have been selected for purchase), *were valueless*; yet the aggregate value of the forty-four in that month was 6804*l.* 5s., while in the interim, from Jan., 1852, to Dec., 1860, the dividends from profits on the shares purchased for the sum of 5451*l.* 5s. were 6384*l.* 0s. 6d., showing an average percentage in the 9 years of 13 per cent., and a profit on the investment of 1352*l.*! In an article like this it is impossible to find room for the names and details of all the mines referred to, but they were published in the Dividend List of 1852. We may also add, that by commencing from 1853, we had, as before stated, to spoil the general result by inserting East Rose and other mines, which could scarcely be called dividend mines at all, such as Wheal Golden, Spearn Consols, Calstock, &c.; we have also had to leave out the richest mines of the day, such as West Seton, West Basset, East Basset, Minera, &c., because their riches were not discovered in 1852. Among individual mines named in the list, Devon Consols paid 510*l.* 10s. in dividends, the price of the shares in January, 1852, being 280*l.* (1*l.* per share paid up), and the price in January, 1861, 425*l.* South Frances paid in the nine years 528*l.* on one share, which in 1852 cost 150*l.*, and worth in January, 1861, 315*l.* (per 248th). West Caradon paid 205*l.* on a 256th share, which in 1852 cost 117*l.*, and in January, 1861, was worth (as 4-1024ths) 316*l.* St. Ives Consols paid 314*l.* in dividends on a 94th share, which in 1852 cost 125*l.*, and worth as 10-94ths in Jan. 1861, 500*l.* Wheal Margaret paid 325*l.* in dividends on a share (112th) which in 1852 cost 140*l.* and worth as 8-896ths, in Jan., 1861, 432*l.*"

I am invariably applied to after the publication of this Review for a selicted list of mines in which investors may purchase with safety, and with the prospect of a rise in value, and on Jan. 1, 1861, I made out a list, comprising altogether about 20 mines, dividend and progressive. If we review that list now, it will not, on the whole, be a pleasing picture, but we must remember the circumstances which occurred in relation to the American war and the fall in metals, and then it will not look so bad. That it was well selected at the time, and that many who acted upon it made large sums of money, the following will show. Among the eight dividend mines was South Frances, then at 155*l.*, and in February the share rose to 200*l.* West Caradon rose considerably in a month, and Wheal Seton rose 60*l.* per share in a month after the list was made out. Cwm Erfin shares were then 11*l.*, rose to 15*l.* in a month, and are now 20*l.*, after paying in the year 3½*l.* per share in dividends. East Caradon shares were 11*l.* 15s. when I made out the list, are now 29*l.*, and paid in dividends 1½*l.*, besides. Marke Valley shares were then 4*l.* 5s., and are now 10*l.*, after paying 15s. in dividends. Here are five dividend mines out of eight which were rightly selected, and three of them, notwithstanding the disastrous year, have paid large dividends, and risen cent. per cent. in value! I think I may, therefore, take credit for the list altogether, and a division of risk to secure success in the aggregate has always been my advice to investors.

The circumstances of the year have been more disastrous to progressive and calling mines; but out of my list, Cook's Kitchen has advanced from 18*l.* to 31*l.*, and become a dividend mine. East Carn Brea, from 7*l.* to 12*l.*; East Grenville, 16s. to 3*l.* 10s.; others also rose during the year, though at present they are temporarily depressed.

In reference to the future, many mines, as it will have been seen, are very low, and it is a time when good investments may be made; but as some hundreds of persons applied for last year's list, and I am aware that many to whom it was freely given transacted their business connected with it elsewhere, the selected list for the present year will be charged for at the rate of 1*l.* 1s., such fee to be deducted from the commission in case any business results from it.

I do not pretend to any unusual foresight in these matters, but it must be seen that in collecting from official sources for 18 years in succession the matter for this Review, I have more than ordinary means of drawing conclusions.

DIVIDEND MINES.*

BEDFORD UNITED has sold this year 2462 tons of copper ores for 13,082*l.*, and divided 2400*l.*, or 12s. per share. Since 1850 the mine has paid the shareholders 48,000*l.* in dividends, upon an outlay of 9000*l.* The mine is looking better than for some time past, particularly in the western part of it, where there is a good lode in the 115, 103, and 90 ends, and in the back of the latter fine large rocks of ore, similar to what was found when the lode turned out 12 to 14 tons per fm. The prospects altogether are such as to give hope of increased returns and profits.

BOSCEAN (tin) has divided this year 1320*l.*, against 720*l.* in 1860. The mine is a private adventure, and never dealt in on the market. In 1860 active operations were commenced on the Pool lode in Higher Boscean, Lower Boscean, and East Boscean, and seem to have resulted in large profits, when other tin mines have paid less.

CARN BREA has sold this year 2984 tons of copper ore for 10,489*l.*, and 536 tons of tin for 36,192*l.*, and has paid dividends (2*l.* per share) 2000*l.*, against 14,000*l.* in 1860. These mines have been seriously affected by the decline in metals. The mines are looking well, and an advance in the price of tin will enable good dividends to be resumed. They occupy a tract of ground upwards of a mile in length on the north lode of the Carn Brea Hill, and have altogether divided upwards of 200,000*l.* profit on a small original outlay. The works are carried on upon nine or ten lodes, and 1100 persons are employed upon them. The deepest level is the 197 below adit, on Teague's lode, and in depth, as in Dolcoath, the lodes become rich for tin.

CEFN CWM BRWYNO has sold 344 tons of lead and 40 tons of blende for 4373*l.* 7s. 4d., and divided 800*l.*, or 4*l.* per share. The mine is under the management of Messrs. John Taylor and Sons, and the prospects have lately improved by the 56, or deep adit level, entering a very promising piece of ground, from which much is expected, as the several levels are carried on eastward into it.

CWMDYLE ROCK MINING COMPANY (Limited) sold in the 12 months ending Sept. 30, 1861, copper ores for 2933*l.* 15s. 2d., and in April paid a dividend of 10 per cent. on the paid up capital of 1200*l.*—120*l.* In the No. 4 level, north-west, a lode of copper was discovered, in November, 2 ft. wide, nearly solid, and which, it is hoped, will increase the returns.

CWM ERFIN (lead, Cardiganshare) has sold 680 tons of lead for 10,322*l.* 1s. 3d., and divided 2817*l.* 15s., or 3*l.* 5s. per share, against 1647*l.* 6s. in 1860. We stated in our last Review that the mine was likely to do better this year. The mine is under the management of Messrs. John Taylor and Sons, and has good prospects for the future.

CWMYSTWITH (Cardiganshire) has sold 1248 tons of lead and 76 tons of blende for 15,524*l.* 9s. 4d., and divided 2432*l.* (19*l.* per share), against 4800*l.* in 1860. Under the management of Messrs. John Taylor and Sons. During the past year the mine has been less profitable than for some years past, consequent, in some measure, on the state of the mine, and not entirely on the reduced price of the produce; but, with its present prospects, and the large amount of tutwork being carried on, better results may be expected for 1862.

DEVON GREAT CONSOLS have sold in 1861, 20,801 tons of copper ore, realising 104,073*l.* 9s.; against 21,920, tons, and 110,422*l.* 16s. 6d., in 1860—decrease in 1861, 1119 tons. The decrease in 1861 has arisen from the same cause as was in operation in 1860—the fall in the standard during the summer, which induced the directors to reduce the samplings to the lowest quantity consistent with payment of costs and dues in June and July—the quantity brought forward was about 1150 tons per month; but an improvement having taken place in price, the samplings were again increased to above 2000 tons per month; the result, however, leaves a deficiency in the annual quantity, as above stated. The dividends paid during the year have been 43,008*l.*, or 42*l.* per share; against 48,128*l.* or 47*l.* per share, in 1860. The explorations on the south lode have been regularly prosecuted during the year, and this lode has now been opened out for a distance of more than 160 fms.; having been met with as deep as the 115, east of the Field shaft at Wheal Josiah; and found holding up as shallow as the 40, east of Hitchins's shaft. In the 115, east of the Field shaft, the lode was found to be a fine course of ore, worth 10 tons per fm. In a rise in the back of the 40, east of Hitchins's shaft, which is a continuation of a rise in back of the 50, the lode is worth 5 tons of ore per fm. The following is the latest report of the different operations in the mine:—

WHEAL JOSIAH.—Field Shaft: In the 115 east, on the south lode, the lode is again disordered by another portion of the cross-course; it is still, however, a good course of ore, worth 5 tons per fm., and on getting clear of these intersections a great improvement is anticipated. In Carne's rise, in back of the 115 east, on the south lode, the lode is a good course of ore, worth 6 tons per fm. In the 103 east, on the south lode, the lode is 5 feet wide, and worth 5 tons of ore per fm. In the 80 east, on Frank's lode, the lode is worth 2 tons of ore per fm. In Crossman's rise, in the back of the 80 east, on the south lode, the lode is a good course of ore, worth 5 tons per fm.—Hitchins's Engine-shaft: In the 50 east, west of Trevena's cross-cut, on the south lode, the lode is improved, being at present 4 feet wide, and worth 4 tons of ore per fm. In the 40 east, west of Bennett's cross-cut, on the south lode, the lode continues a fine course of ore, worth 10 tons per fm. In the 40 east, and east of Bennett's cross-cut, on the south lode, the lode is also a good course of ore, worth 5 tons. per fm.—Agnes' Engine-shaft: In the 144 east the lode is worth 3 tons of ore per fm.—New Ground: In the deep adit level west the lode is of good size, 4 ft. wide, composed of mundic, capel, and quartz, and the ground is improved, and become more mineralised. In the shallow adit level the lode is small, 18 in. wide, composed of gossany mundic and prian.

DOLCOATH (tin and copper, Camborne) has sold this year 433 tons 1 cwt. 2 qrs. of copper, for 1655*l.* 11s.; 931 tons 2 cwts. 2 qrs. of tin, for 66,745*l.* 17s. 10d.; arsenic, 30 tons, for 120*l.*, and has divided 16,626*l.*, or 47*l.* per share. The actual profit, however, has been 22,626*l.*, as 6000*l.* have been expended in new machinery and pitwork. The mine has been at work 120 years, was rich for copper to the 160 fathom level, and made 600,000*l.* Below the 160 tin was found, and the returns of that metal have been enormous, and are now 80 tons, worth about 11,000*l.* per month. There are seven lodes in the mine, and the greatest depth 270 fms. A vigorous exploration has just been commenced of the western part of the mine, adjoining Stray Park, and drained by the new engine, where the mine for 200 fms. in length is not worked below the 190, whereas the main workings at the engine-shaft, as before stated, are 270 fms. deep below adit. The bottom of the 190 west, for 120 fms. in length, is standing entire, and worth on the average 30*l.* per fm. for 6 ft. wide; also eastward, at the 190, which is the deepest level there, getting under extensive workings, standing below the 170, adjoining Cook's Kitchen.

EAST BASSET has sold 1798 tons 3 cwts. of copper ores for 16,770*l.* 10s. 7d.; tinstuff, 768*l.* 11s. 3d., and divided 26*l.* per share (13,312*l.*), against 15,872*l.* in 1660. The levels in the mine are poor, though the lode is large, and of a kindly appearance. The stopes are producing a fair quantity of ore, but are not so good as they were. The eastern shaft has been commenced sinking below the 90 and the 110, driving towards the same lode. Upon these points chiefly the prosperity of the mine will depend, and it will require three or four months to develope them.

EAST CARADON, the great prize of the year, has sold 2770 tons of copper for 20,992*l.* 9s. 4d., and divided 8448*l.*, against 768*l.* in 1860. The principal operations are on the "caunter lode," where ore was first discovered in the 50 fm. level. The shaft is now down 70 fathoms, and the lode expected to be cut in the 70 in four months. In the 50 level there has been a continuous course of ore for 118 fms. long, and it may be said to be the richest course of ore in Cornwall. The end east is now worth from 80*l.* to 100*l.* per fm. The 60 end is about 40 fms. behind the 50, and has a rich course of ore for the 63 fathoms driven upon it, and the end east worth 50*l.* per fathom. The reserves of ore may be safely estimated at 90,000*l.*; and when the lode has been cut in the 70, and pitches set in the back of the 60, the returns must greatly increase, and we shall not be far out in estimating the dividends for 1862 at 25,000*l.* In addition to the caunter lode, operations are being carried on upon Fawcett's lode, now productive; and in a cross-cut south on the 60 a new lode was met with on Saturday last, worth 20*l.* to 30*l.* per fm. This lode underlies north, and is from 9 to 10 fms. south of the caunter, and is a great addition to the value of the property. In may be also observed, in respect to cutting the caunter lode rich in the 70, that in South Caradon it has been met with rich 100 fms. deep.

EAST DARREN (Cardigan) has sold 907 tons of lead, for 13,382*l.* 10s. 10d., and divided 1800*l.*, against 2550*l.* in 1860. The mine is under the management of Messrs. John Taylor and Sons. The prospects have somewhat improved during the past year, though the dividends have not been large; and hopes are entertained that the results of 1862 will prove satisfactory, as there appears less porphyry in the deepest part of the mine.

GREAT SOUTH TOLGUS has sold this year 1660 tons of copper ore, for 12,123*l.*, and divided 3000*l.*, or 5s. per share, against 11,100*l.* in 1859. Altogether, since 1855, the mine has paid 47,550*l.* profit, and was a great success in its early days; lately it has not looked so well.

LISBURNE MINES (Cardiganshire), under the management of Messrs. John Taylor and Sons, have sold this year 2642 tons of lead ore and 57 tons of blende, for 33,892*l.* 19s. 7d., and divided 6800*l.*, or 17*l.* per share, against 8800*l.* in 1860. These mines have made a satisfactory profit during the year, considering the price of lead, and the prospects are good as for some years past. The company have lately obtained a new lease for 21 years.

MARKE VALLEY has sold 4010 tons of copper ore for 20,521*l.* 15s. 5d., and paid 6750*l.* (15s. per share) in dividends, against 2475*l.* in 1860. In my Review last year I called particular attention to the different points of operation in this mine, and stated that the shareholders might look forward to constant and improving dividends. The shares were then at 4*l.*, and are now at 10*l.* Besides the large increase in the profits of the mine, the reserves of ore are much larger, and there are still good points to come off which may further improve the value of the property. The main part of the lode in the 100 east is expected to be cut in about 4 fms. driving. The chances are also in favour of increased dividends in 1862.

MINERA (lead, near Wrexham) has sold this year 4763 tons of lead, for 60,244*l.* 17s. 6d., and 855 tons of blende, for 2863*l.* 5s., and paid in dividends 27,450*l.*, or 15*l.* 5s. per share. The mine is looking as well as ever, and is worked by a "limited" company, in 1800 shares, upon which 25*l.* per share has been paid-up, and 75*l.* 1s. returned in dividends. There are six directors, who meet monthly at the mines, and the dividends are declared quarterly. The annual meeting is held in August. Mr. John Taylor, jun., is engineer and chief manager, Mr. John Darlington resident agent, and Mr. J. Frazer secretary.

PAR CONSOLS sold this year 3389 tons of copper for 30,103*l.* 10s. 10d., and 307 tons of tin for 20,987*l.* 11d. 5d.; and paid in dividends 4800*l.*, against 7300*l.* in 1860. The fall of tin in a mine like this, selling nearly 300 tons a year, has been very serious; besides which a large sum of money has been expended in new machinery and new works. The eastern, or copper mine, is 200 fms. deep; the western, or tin mine, 125 fms. deep, on Puckey's lode; and the tin returns about 25 tons per month.

PARYS MINES, Anglesey, under the management of Messrs. John Taylor and Sons, have sold this year copper ores, 5149 tons, for 24,237*l.* 4s. 4d.; precipitate, 408 tons, 3850*l.* 12s. 2d.; ochre, 707 tons 10 cwts. 1 qr., for 896*l.* 4s. 6d.; pyrites, 62 tons, for 62*l.* 14s.—Total, 29,046*l.* 15s., and divided 12*l.* 10s. per share, or 2500*l.* The mine is more of a private than public adventure.

POLBERRO (tin mine), under the management of Messrs. John Taylor and Sons, has sold 209 tons of tin for 15,206*l.* 16s. 9d., and divided 2215*l.* against 5000*l.* in 1860.

PROVIDENCE MINES have sold 292 tons 18 cwts. of tin for 20,670*l.* 4s. 7d., and, notwithstanding the depression in the price of tin, have paid 4480*l.* in dividends, against 8680*l.* in 1860. The costs of working during the year have been 15,561*l.* 0s. 3d. The mines paid dividends in 1848, and have paid close upon 70,000*l.* profit upon an original outlay of 11,569*l.* 8s. 1d. The present state of the mines is of the same favourable character as for years past; and even at the present price of tin it is said the dividends are not likely to decrease; and as the sett is large, and contains numerous productive lodes, operations are being carried on under careful management to fully develope the property. With a fair amount of interest, therefore, there is the chance of good discoveries.

SOUTH CARADON divided 15,360*l.*, or 30*l.* per share, against 16,896*l.* in 1860. Altogether, the mine upon a small outlay of 5*l.* per share, has divided over 180,000*l.* profit since 1838. The operations are upon 10 or 12 lodes, and consequently the costs of working are heavy. During the autumn of the present year the lode of East Caradon has been cut rich 100 fathoms deep, and has greatly added to the value of the mine.

SOUTH TOLGUS has sold 2276 tons of copper ore for 15,825*l.* 1s. 3d., and divided 1792*l.* (3*l.* 10s. per share) against 5632*l.* in 1860. The prospects of the mine have improved of late, and it is hoped regular dividends may be declared in 1862, as there are several productive points in the mine.

SOUTH FRANCES has sold this year copper, 2807 tons, for 17,087*l.* 4s. 6d., and divided 5*l.* 10s. per share, or 2728*l.* The prospects of the mine have been gloomy of late, owing to the poverty of the levels in the old mine and the lawsuit with West Basset as to the exact line of the northern boundary. The ground in dispute, and claimed by both parties, is about 30 feet wide, and said to contain from 20,000*l.* to 50,000*l.* worth of ore. To this time the South Frances shareholders have had the best of the suit, and it is now said the West Basset Company have withdrawn their appeal to the House of Lords, which looks still more favourable, and it will be a very important thing if decided in favour of South Frances, though the West Basset people will consider themselves grievously wronged. South Frances first paid profits in 1846, and has upon an original outlay of 18*l.* 18s. 9d. per share paid 177,176*l.* in dividends. These profits were made chiefly from the eastern mine, which is now poor; but around Pascoe's shaft, in the western sett, a new mine is being opened out, and within the last fortnight a considerable improvement has taken place in several of the levels, so that the shareholders may look for better results in 1862.

SPEARN MOOR has sold 81 tons of tin for 5668*l.* 18s. 3d.; copper, 17 tons, for 144*l.* 4s. 3d., and paid 2*l.* 10s. per share, or 600*l.*, in dividends. In the early part of the year the prospects were good, with reasonable hope of continuous profits; but the productiveness of the lode in the bottom (the 110) suddenly fell off, which has prevented further dividends being paid, and the mine is now in debt 343*l.* 1s. 10d.

WEST FOWEY CONSOLS have sold this year 202 tons of copper ores for 1643*l.* 10s. 4d., and 197 tons 12 cwts. tin for 13,604*l.* 16s. 8d., and divided 1600*l.*, against 2080*l.* in 1860. The eastern, or copper part of the mine, is 120 fms. deep; the western, or iron part, 200 fms.; and the returns are about 15 tons of tin per month. The mine has not been looking so well this year, but is understood to be improving, and likely to pay better in 1862. A committee has been appointed to obtain a new lease.

WEST SETON has sold this year 6957 tons of copper ore for 44,488*l.* 1s., and divided 20,800*l.* (52*l.* per share), against 27,000*l.* in 1860. The dividends and sales have been less this year owing to an accident to the machinery delaying the returns for a few weeks. The mine commenced dividends in 1854, and has paid about 120,000*l.* upon an original outlay of 19,000*l.* The mine has good reserves, is well managed, and has two or three good points to come off. The ore ground dips west, and a new shaft, 128 fathoms west of the engine-shaft, has been sunk to take the run of ore ground. Here, in the 28 west, the lode has just come into ore, with a very promising appearance. Throughout the mine the ends are producing 8½ tons, winzes 6 tons, stopes 63 tons per fm., and tin 20*l.* per fm.

WHEAL BASSET has sold this year 2941 tons 6 cwts. 3 qrs. of copper ore for 21,242*l.* 1s. 3d.; tin, 51 tons for 3624*l.* 8s. 11d.; and has paid 13*l.* per share (6656*l.*), against 12,288*l.* in 1360. The mine is looking moderately well, and there are frequent branches of ore in Paddin's and Giesler's lodes. The old engine-shaft is being sunk below the 140; the lode is large, but coarse in quality. In the western part of the mine, about Richards's shaft, there are favourable prospects. In driving the 40 north a kindly lode, supposed to be Giesler's, has been cut, and good ores of copper and tin raised; and the 60 and 80 fathom levels are being put on to get under this. At Carn Kie the north lodes are looking very promising, and there are great expectations in this part of the mine. It will be seen, therefore, while the shareholders may expect good dividends on the present price of shares, there are fine chances for discoveries.

WHEAL CLIFFORD has sold 7445 tons of copper ore for 47,232*l.*, and divided 13,500*l.*, or 27½*l.* per share, against 16,500*l.* in 1860. During the year the mine has been amalgamated with the United Mines, the whole now being in 2900 shares. A holder of 1-500ths share in Clifford before the amalgamation now holds 5-2900ths, a holder of 1-400ths United 1-2900ths. Up to Aug. 26 the profits of Clifford were divided on the 500 shares, and up to the same period the losses in the United Mines have to be paid in calls on the 400 shares. From that date the amalgamated properties share alike, losses and profits. This amalgamation was necessary in order to prevent the stoppage of both mines, inasmuch as the United were working at a loss of some thousands per month, and to stop them would be to drown Clifford. The water charges are very heavy indeed; but the agents hope to make good profits on the amalgamated mines, as the United, although very poor at present, has several points to be explored which hold out encouragement for future success.

WHEAL FRIENDSHIP, one of the oldest, and formerly the richest mine in Devonshire, under the management of Messrs. John Taylor and Sons, has sold copper ores and mundic for 14,082*l.* 17s. 7d., and has divided 640*l.*, or 5*l.* per share.

1, *St. Michael's Alley, Cornhill, London, Dec.* 27, 1861.

LLANMORLAIS COLLIERY COMPANY.

This property has been carefully surveyed by Mr. John Bletthyn, of Landore, a gentleman well known in the locality as a mineral and mechanical engineer, and it will be gratifying to the shareholders to learn that the report subjoined, which enters very fully into every detail connected with the colliery, is of a generally satisfactory character:—

Landore, Swansea, Dec. 26.—I have examined the Llanmorlais colliery property, and beg to say that I have made myself acquainted with the boundaries, and find that it is well selected, and comprises all the seams of coal as named in the section.—Coal Measures: I find the coal to be highly bituminous, and the best quality in the South Wales mineral bason, the small being of superior quality for coking, and will be of value for locomotive and blast furnaces; all those veins named in the section are the same nature, differing only in their ash, some being white and others red, and good for all manufacturing purposes, as they make no clinker. I am satisfied the veins of coal are in your taking, two veins actually being proved in the pit: the first, or No. 1, is the Fiery vein, 5 feet thick; the second, or No. 2, is the Frog-lane vein, 4 feet thick, with a good hard top and bottom; and, as far as I can see, require but little timber; worked economically, will yield a great quantity of coal. Those veins are intersected by drifts at the bottom of the pit, one to the north 10 yards strikes the 5 ft., the other south intersects the 4 ft. I would recommend the pit to be sunk to this vein, as it will be the best to carry on the workings, and by driving two main headings in the coal east and west on a level course to the boundaries, with one course of top holes or stalls, merely for air, the colliery will thus be opened at a small outlay. This done, two slants should be driven in the coal in the 4 ft. vein, at an angle of 30 to the dip, and at 40½ degrees north-east a second slant on the same dip at 50 degrees north-west, to the depth of 150 fms.; this done, two drifts should be driven north, at the bottom of those slants, to the 5 ft. vein, opening the coal at those points, when 200 tons of coal per day could be worked by those appliances; these veins alone would produce two million tons of coal.—Water: The old workings would not interfere with the colliery for many years; the new stalls in the main headings should not be driven up more than 20 yards from the main levels; the main levels would also catch all the water, and it could be conveyed to the pumps.—Surface Water: A small level should be driven across the strata south, at the lowest convenient point on the property, to intersect the surface or crop water, which is of the greatest importance to a colliery: this is not an urgent case, but should be done at leisure.—Pit: The pit is set in a central part of the property, and is capable of being made to carry on a large trade; is now sunk 31½ fathoms deep, and of good size; about 30 yards have been built of stone and good mortar; this is done in a workman-like manner, and is thoroughly substantial. I would recommend that it should be immediately built to the top, and completed.—Air-Pit: The air-pit should be maintained, as those veins require good and substantial air ways to clear away all the gases that may be in the workings.—Engine Power: An horizontal high-pressure steam-engine, of 20-inch cylinder, will be required with a pumping gear that can be disconnected at pleasure, a double force-pump, of 9 inch diameter, which would be less liable to yet out of order than the old plan of pumps; this would wind the coal to the surface, and pump the water.—Small Engine: The present small engine on the property would haul the trams from any point in the underground workings to the bottom of the pit, and would be available for any other use.—Cost of Working: The coal can be raised and put on board vessels at 3s. 6d. per ton; drifting north or south in the strata should be done at 20s. per yard, powder included; drifts should be 6 feet high and 5 feet broad; the distance from one to the other of those veins is about 25 yards.—Transit: A light railway from the mouth of the pit to a point on the Aberlogin Railway, near the shipping place: this done on an easy gradient, one horse could haul up eight or nine empty trams at a time, those would carry 25 cwts. of coal each; one of the trams should be fitted with a good break, the horse and man could then ride all the way down with the full trams, thus the eight trams could run down in five minutes, and return in ten minutes. A stout double line of railway should be made at the shipping place, as a siding to hold the empty trams; this will cost 470*l.*—Shipping: A timber shipping place or stage, and a light traversing balance crane with a capsising carriage for tipping the trams into the hold of the vessel; this done, the coal would then come from the colliery into the headings to the vessel with once shifting, thus making a great saving of breakage, and vessels could be loaded at high-water as well as low-water: this will cost 230*l.* The coal will work nearly one-half large, and sell free on board vessels at 7s. 6d., making a clear profit of 4s. per ton. I consider that selling the coal through and through, as it comes from the colliery, is the best and most economical way.—Railway: A railway to meet the South Wales at the nearest point will cost 400*l.* Any further information you may desire I shall be happy to furnish.—P.S. The whole of the drifting could be done in three weeks from the date of commencement.—JOHN BLETTHYN.

OUTLET AND INLET COCK.—Mr. Clarke, the gas engineer of Moorgate-street, has recently patented an ingenious cock for supplying boilers and other receptacles of fluid. From the specification just filed by Mr. Henry, the patent agent, Fleet-street, it appears that this cock is so constructed that the same motion of the handle and action of the plug that control the outlet from the boiler or vessel also control the supply thereto; for this purpose the plug is extended beyond the discharge opening into an additional fluid way forward through the cock, and communicating at one end with the boiler, and at the other with a supply pipe; the plug is recessed at this part, and has an orifice leading into the recess. When the plug is turned to open the discharge way it brings this orifice opposite the inlet passage, and opens a supply way. So also when the plug is turned to close the discharge way it likewise closes the inlet way. A pipe is fixed to the cock leading into the discharge fluid way, and entering within the boiler to any required height, so that the water is only drawn off when at a determined level. These arrangements maintain a supply as fast as liquid is drawn off, and allow of an intermediate or supply cistern and ball-cock being dispensed with.

HOLLOWAY'S PILLS AND OINTMENT SUITABLE FOR ALL.—These purifying preparations should be in every house; they are composed altogether of vegetable extracts, and being entirely free from mercury or any other mineral, they may be used with the utmost safety and certainty of success by all members of the family circle. Their action is always alterative and slightly aperient. They regulate digestion, adjust the secretion of the liver, promote the activity of the kidneys, and over every organ exert the most wholesome control, rousing the sluggish, and repressing excessive action. Their beneficial influence is not confined to any particular region, but ranges over the entire system, from which they eradicate everything that is noxious, and substitute health for disease.

* The returns of some of the dividend mines cannot be made up this week, owing to the sales of Thursday not reaching us in time, and in consequence of the great length of the Review this year, we find it impossible to give the whole of it in one paper. The entire work, therefore, including statistical notices of, and points of interest in, all the principal mines in Cornwall and Devon, will be published in about a week, in a pamphlet, with larger type, and may be had, price 1s., at the office of the *Mining Journal*, or of Messrs. Watson and Cueli, No. 1, St. Michael's-alley, Cornhill, London. Those pursers and secretaries who have not yet sent the statistical returns of their mines, are requested to send them to Mr. Watson without dela , or their mines will not be noticed.

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—S. Thomas, T. Hosking, Dec. 24: The main lode in the 160, driving east from Davey's engine-shaft, is 6 ft. wide, occasionally producing good stones of ore; the said level, driving west, is 5 feet wide, with spots of ore. The lode in the 150, east of the said shaft, is 5 feet wide, producing stones of ore. The north lode, driving east of cross-cut in the 140, is worth 4*l.* per fm. The north branch in the 130, west of cross-cut, is worth 5*l.* per fm. Roberts's stope, in the back of the 140, is worth 15*l.* per fm. Taylor's stope, in the back of the said level, is worth 12*l.* per fm. Richards's stope, in the back of the 140, is worth 12*l.* per fm. Floyd's stope, in back of the 120, on the main lode, is worth 10*l.* per fathom. The rise in back of the 130 is producing good work, worth 4*l.* per fm. In the 80, driving west, the lode is 4 feet wide, producing occasionally good stones of ore. No alteraton in any other part to remark on. We sampled this day, computed, 286 tons of ore.

BEDFORD CONSOLS.—J. Mitchell, Dec. 26: In the middle adit level, on the north lode, we have nothing new to report on this week. On the No. 1 agush lode we are still driving by the side of the lode, but intend to cut into it the latter part of next week; the ground in the cross-cut south is a little easier for driving than when last reported on. There has been nothing met with yet in the cross-cut north, east of the air-shaft. The tributers' pitch in back of the 27 is much the same as for some time past.

BORRODALE.—W. Dixon, Dec. 26: The working on Walton's stage, where we are cross-cutting, has the same appearance as in last report—small pieces of lead in the hard rock; also the working on Gill's stage continues to raise a small quantity of second quality wad.

BRONFLOYD.—M. Barbery, J. Lester, Dec. 26: The south lode, east of Thompson's cross-cut, continues to yield very good stones of lead and copper ore.—North lode: We are opening a little east and west of cross-cut at the bottom of the winze sunk from the 17 before we resume the sinking down to meet the 40 fm. level. The lode in each end is mixed throughout with good stones of ore. No alteration in the 40, driving west to come under the winze.

BRYN GWIOG.—Dec. 24: The stopes in Nos. 1 and 2 winzes continue to be of the same produce for lead ore as last reported. No. 3 winze is without change; lode poor. The 66 west is in a lode 2 ft. wide, composed of shale. The winze sinking below this level, east of shaft, is in hard ground; lode small. The 75 west is hard and poor just now; we expect a favourable change here shortly. The stope behind this level is worth 2 tons per fm. The 75 east produces dressing work. The shaft is sinking in a large lode; present value 3 tons per fm.

BRYNTAIL.—J. Roach: Boulders of gritstone are coming into the lode in the 25, and pieces of ore; I hope, therefore, I shall be enabled to apprise you of an important change taking place in a few days.

CARADON CONSOLS.—W. Rich, Dec. 24: There is no new feature in the mine this week worthy of special remark. We shall commence in a few days to fix skip-road below the 54, also case and divide the shaft preparatory to driving the 60.

CARN CAMBORNE.—W. Bishop, jun., Dec. 24: The 13 fm. level cross-cut is still letting out a great quantity of water. Clarke's lode, east of this cross-cut, is improving as we open on it—a kindly lode. The eastern end, on south lode, is worth 8*l.* per fm. The rise over the adit, on ditto, is worth 7*l.* per fm. There has been no lode taken down in the 10 fm. level end, west of rise, on the adit lode, since last report. Other places are without change to notice.

CHARLOTTE UNITED.—R. Kendall, J. Penberthy, Dec. 21: The lode in the 80, west of the engine-shaft, is 2 ft. wide, yielding good stones of ore; we are expecting a richer lode in this end every day. The winze sinking under the 70, west of the engine-shaft, is down to water; the men are now stoping; the lode is just the same as in the winze, worth 14*l.* per fm. The lode in the 60, east of the engine-shaft, is 20 in. wide, yielding good stones of ore, and is looking very promising for a greater improvement. The lode in the 60, west of the engine-shaft, is worth about 5*l.* per fm. The new lode in the 50, east of the cross-cut, is yielding about 1 ton of ore per fm. The new lode in the 50, west of the cross-cut, is still split into two branches; we are glad to say the horse of ground is becoming smaller, and in a short time we expect the branches will come together and make an improvement in the lode; this level is now coming back in a line where our south lode made rich. The rise in back of the 50, east of the cross-cut, on the new lode is worth 8*l.* per fm.—Trenow: The sumpmen are clearing the 50 west to come into the tribute ground near Richmond's shaft. In the 45 fm. level cross-cut south we have intersected the lode; we are glad to inform you we have found some very rich ore in the lode; we only cut through the lode yesterday; it is 2 ft. wide where we have cut through it; next week you shall hear again, when we shall have cut further into it. Norden's shaft is being sunk by eight men as fast as possible, in order to open this lode with all speed, and communicate to the 45. The lode in the 25, west of Norden's shaft, is 2 ft. wide, at present split into three branches, but is coming together as we drive; we expect in 2 or 3 fms. more driving we shall find them together. The 25 fm. level cross-cut, driving south, is in good ground, and is progressing fast.

CLARA UNITED.—M. Barbery, J. Lester, Dec. 27: We have no alteration in the value of the lode east and west of the 32 cross-cut, but the stopes over these levels have improved. The 20 fm. level east we have carefully dialled, and find that the end is now within 8 feet of the boundary line of these united setts, and 10 fms. from the boundary shaft of Ponterwyd. We shall push on this level with all speed, and hole through so as to get full ventilation from that shaft to all our workings. The lode is much the same as last reported. We have this day sold 20 tons of lead ore to Messrs. Sims, Willyams Neville, and Co.

CUDDRA.—A. Cundy, Dec. 26: We have taken down a portion of the lode at the 100 fm. level, west of Tickell's shaft, which is 2½ feet wide, and worth full 5 cwts. of tin per 100 sacks; this is opening out exceedingly well, and speaks well for the prosperity of the mine. In the 60, at Walker's shaft, no lode has been taken down since last reported, which was then worth 7 cwts. of tin per 100 sacks for 4 ft. wide. In No. 1 stope the lode is 4 ft. wide, and worth 2 cwts. of tin per 100 sacks. In No. 2 stope the lode is 6 ft. wide, and worth 1 cwt. of tin per 100 sacks. The winze sinking in the bottom of this level, east of shaft, is down near 3 fms.; the lode is 6 ft. wide, composed of quartz peach, and capel, with a small quantity of tin, but nothing to value yet. At the same level, west of Walker's, the winze sinking in the bottom is down 4 fathoms; the lode is 4 feet wide, composed of peach, iron, capel, and worth for tin about 1½ cwt. per 100 sacks. In the stope in the back of this level the lode is 4 feet wide, and worth 2 cwts. of tin per 100 sacks. The 60 end west is being driven west by four men in killas under the lode. All the machinery is in excellent working order.

DEVON AND CORNWALL UNITED.—T. Neill, Dec. 24: The lode in the deep adit level, east of shaft, is improved, and producing from 2 to 3 tons of ore per fm. At William and Mary, in the 10, east of engine-shaft, we have taken down the lode, and find it 2 ft. wide, and worth 1 ton of ore per fm., and likely for further improvement. In the other parts of the mine there is no change to notice.

DEVON NEW COPPER.—P. Hawke, Dec. 24: We have taken down a portion of the leader in the back of the 78, which looks well indeed although it is not expected to hold up far above the back of this level, it is sufficient to convince me that we have struck into the run of a course of ore. The progress in driving at the 88 is somewhat slow, in consequence of so much water, but with a little patience the difficulty will be overcome. I forwarded a sample of the veiny portion of the ore, obtained from stoping at the 78, to Mr. Jenkin, of Cailington, for analysis, and have received from him the satisfactory result of 17⅝ per cent. of fine copper.

DEVON WHEAL BULLER.—W. Stephens, Dec. 18: The 45 is set to six men and three boys, to drive on the lode 3 fms., both east and west, and when this is accomplished we intend taking down the lode, and, of course, send you further particulars; the lode was when cut through 8 ft. wide, composed of capels, prian, peach, black and grey copper ore; there are several small branches dropping from the north into the lode, which may be termed feeders, which I cannot in reality describe; its value I should say is from 12*l.* to 15*l.* per fm. The 35 is driving by two men, at 2*l.* 5s. per fm.; this end is driving to the north of the lode, which is cut into occasionally, and when last cut into it was producing a little copper ore, but to-day we have broken some stones of yellow copper ore, a kindly looking lode.

DRAKE WALLS.—Thos. Gregory, Dec. 26: The branches in the 102, east of Matthews's shaft, are producing stones of tin ore. In the 92 east the branches are worth 5*l.* per fm. The branches in the Tye level east are worth 9*l.* per fm. At the 80, west of Betteley's, we have just cut into the main branches west of the cross-course, which are producing good stones of tin, and we have no doubt but in a few days we shall have an improvement as we leave the cross-course. The branches in the 70, west of Brenton's, maintain their value—6*l.* per fm. In the 60, west of Brenton's, we have come in contact with a hard bar of capel, which has rather split up the branches for the time, but we regard this as a temporary change only. We have no change to notice in the 50 or 40 since last report.

DULTA.—J. Martyn, Dec. 24: We shall get our dressing-floors in working order this week, and shall at once commence preparing tin for market. We have discovered a new lode, 12 ft. wide, tinny throughout, and some parts producing 3 cwts. per 100 sacks. In about 10 fms. further driving east this lode will be intersected by Dyer's, Butt's, and Richard's lodes, when no doubt we shall have a large deposit of tin, as the further we go east it improves in size and quality. We have six men now driving on Dyer's lode. I have no doubt but we shall shortly have one of the best mines in the county, as we are close upon the junction of the killas and granite, with eight or ten lodes, all yielding tin.

EAST ALFRED CONSOLS.—H. Skewes, W. Arthur, Dec. 24: Painter's engine-shaft is sunk 7 fms. 5 ft. below the 70 fm. level; the 70 fm. level west of the above shaft is progressing favourably; the lode in this end is 1 foot wide, with stones of mundic and spots of copper ore; we are daily expecting an improvement in this end, as we are nearing the ore ground in the level above. In the 50 fm. level, driving west of engine-shaft, the lode in the end is 1 foot 6 inches wide, and is orey throughout, opening tribute ground; in the rise in the back of this level the lode is 2 ft. wide, worth 10*l.* per fm.; the 38 fm. level, since last reported, has been driven through a good lode of yellow copper ore; the lode in this end is 2 ft. wide, and is worth 18*l.* per fm. We have two pitches working at 4s. 6d. in 1*l.* on tribute; the rest of our pitches are much the same as when last reported.

EAST CARADON.—W. Rich: I have inspected the mine and sent you a telegram, as follows:—The new lode is 18 in. wide, cut through, worth 20*l.* per fm.; the 50 east worth 80*l.* per fm.; and the 60 east worth 40*l.* per fm. As regards the new lode, it is a promising one so far as yet seen, but it has only been cut into at the middle part of the end; I think 20*l.* per fathom its full value; the lode looks as if it will go smaller going east. The 50 has failed considerably, and I think likely to go poorer still. The 60 east is still looking promising, and the lode is worth 40*l.* per fm. Fawcet's lode is poor.

EAST CARN BREA.—T. Glanville, Dec. 21: Monthly Setting—Tutwork:—A new shaft to sink from surface 20 fms., to be carried 12 feet long and 6 feet wide within timber; the takers to provide all horses, landers, and materials that may be required, by 12 men, taken at 130*l.* per bargain. The engine-shaft to sink below the 50, by nine men, at 80*l.* per fm. The 50 to drive west on the engine lode, by four men, at 4*l.* per fathom. The 50 cross-cut to drive north of the engine-shaft, by four men, at 8*l.* 10s. per fathom. The 50 to drive west of the cross-cut, on the south lode, by six men, at 2*l.* 10s. per fm. The 50 to drive east of the cross-cut, by four men, at 4*l.* per fm. The 40 to drive east of the cross-cut, on the south lode, by six men, at 4*l.* per fm. The 40 to drive west of the cross-cut, on the south lode, by four men, at 5*l.* per fm. The 40 to drive east from the western shaft, on the south lode, by four men, at 4*l.* per fm. The 30 to drive east from the western shaft, on the south lode, by four men, at 4*l.* per fm. The 30 to drive west from the western shaft, on the south lode, by two men, at 2*l.* 10s per fm. The rise in the back of the 40, by four men, at 3*l.* per fathom. The 26 to drive east of the cross-course, on the south lode, by six men, at 3*l.* per fm. The 26 cross-cut to drive south, to cut the south part of the south lode, by two men, at 5*l.* per fm. The 40 to drive east on the middle lode, by two men, at 3*l.* per fm. The 50 to drive east on the middle lode, by four men, at 4*l.* per fm.—Tribute Setting, December, 1861, and January, 1862; Set Dec. 21, 1861:—South Lode: A pitch in back of the 26 to extend from Sampson's winze, 15 fms. east and 10 fms. high, by two men, at 5s. in 1*l.* A pitch in back of the 26 to extend from Sampson's winze, 10 fms. east and 10 fms. high, by two men, at 6s. 8s. in 1*l.* A pitch in back of the 26 to extend from cross-cut, 10 fms. west and 10 fms. high, by two men, at 9s. in 1*l.* A pitch in back of the 26 to extend from the cross-cut, 10 fms. east and 10 fms. high, by two men, at 6s. in 1*l.* A pitch in the back of the 26 to extend from Rule's pitch, 15 fms. east and 10 fms. high, by two men, at 9s. in 1*l.* A pitch in the bottom of the 26 to extend from the cross-cut, 10 fms. west and 8 fms. below, by four men, at 6s. in 1*l.*—Middle Lode: A pitch in back of the 50 fm. level from George's winze so far west as Nancarrow's winze, and so high as the level above, by four men, at 2s. in 1*l.* A pitch in back of the 40 to extend from Kellow's pitch, 10 fms. west and 10 fms. high, by two men, at 4s. in 1*l.* A pitch in the back of the 40 to extend from the cross-cut, 10 fms. east and 10 fms. high, by four men, at 5s. in 1*l.*—Engine Lode: A pitch in the bottom of the 40 to extend from the end, 5 fms. east and 5 fms. west, and 8 fathoms below, by two men, at 4s. in 1*l.* A pitch in the back of the 40 to extend from within 6 feet of the engine-shaft, 10 fms. west and 10 fms. high, by two men, at 12s. in 1*l.*

— T. Granville, Dec. 24: There is no alteration in our underground operations since last week. We have sampled to-day 345 tons of copper ore.

EAST DEVON GREAT CONSOLS.—T. Richards, Dec. 24: We are making fair progress in sinking the engine-shaft below the 52. The lode in the 52, west of shaft, and also the south lode, at the 40, continues to present very favourable appearances, and the ground very easy for progress.

EAST ROSEWARNE.—J. James, Dec. 21: The 55 east is still disordered; we expect an improvement shortly, as the lode was precisely similar in the level above at this point, after which we intersected a north branch that greatly improved it. There is no change in the lode in the 55 west. There is more water issuing from the elvans, which indicates better ground. The stope over this level is worth 10*l.* per fm. The stope below the 43 west is worth 25*l.* per fm. We calculate to sample on Tuesday next 80 tons of good quality ore.

EAST TREFUSIS.—J. Hosking, Dec. 26: At the engine-shaft sinking below the 58, on Smith's lode, the lode is 18 in. wide, containing quartz, with bright spots of yellow ore. In the 58, driving east of cross-cut, on Trelawny lode, the lode is considerably changed; it is now 1 ft. wide, composed chiefly of gossan. In the 34, driving east of engine-shaft, on Trelawny lode, the lode is split into three parts, the south part, which is about 1 ft. wide, contains chlorite, and producing good stones of tin. In the 22, west of engine-shaft, we have met with Smith's lode, which was heaved north 5 feet by a cross-course; we have driven on its course about 7 ft.; the lode is 3 ft. wide, in the granite, and composed of quartz and gossan, similar to the east of cross-course.

EAST TRESKERBY.—J. Nancarrow, Dec. 24: We have still a very promising orey lode in the 20 east, which is likely to turn out well. There is another branch intersected in the 40 fm. level cross-cut, which contains strong yellow ore, and looks well for the lode beyond it. The ground in the flat-rod shaft is favourable.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Dec. 24: The engine-shaft is 9 fms. 5 ft. 6 in. below the 35; we have not taken down any lode this week, but we have picked into it, and broke some very good stones of ore and tin, and we think the lode will be found on the next taking down more promising. There has been no lode taken down in the 35 east since our last, the men having been engaged cleaning the both parts. The lode in the 35 west is nearly 2 ft. wide, yielding about 1 ton of ore per fm., and looking very promising. The stopes above the 35 west are worth for copper and tin from 5*l.* to 7*l.* per fm. The lode in the 25 east is 20 in. wide, producing stones of tin. On the whole, we think this mine is looking very kindly.

EAST WHEAL MARTHA.—J. Richards, Dec. 25: We are getting the house prepared for a smith's shop, office, &c. We have cleared the adit level to the shaft on the north lode; the level must undergo some repairs, the timber therein being poor. The lode from which I sent you a box of specimens is a very fine one indeed, and I believe it will be found to be a very productive one on fairly working it.

EAST WHEAL RUSSELL.—J. Goldsworthy, Dec. 20: The water at Homersham's shaft is not as yet in fork, therefore we have not been able to see the lode in the 120, referred to in last report. There is but little or no change in any of the bargains throughout the mine since last reported on.

— John Goldsworthy, Dec. 24: Homersham's Shaft: The water is not as yet in fork. We hope to see the 120 by the latter part of the week, as the weather is now set in dry; the late rain has increased the water nearly three strokes per minute upon the engine, which is now working six strokes per minute. In the 110 east the lode is 4 ft. wide, producing good saving work, with a kindly appearance to further improve. In the 88 west the lode continues to be of a very kindly appearance, and produces rich stones of ore, and carries a leader of mundic 1½ ft. wide. There is no other change.

EXMOUTH.—J. P. Nicholls, Dec. 24: The lode in the 60 north has very much improved since last report; the end will now yield full ½ ton of lead per fm., with good indications of further improvement. The cross-cut east, just behind this end, has been extended 15 fms., where we have intersected a lode 18 in. wide, yielding good work, and letting out a large quantity of water; I think this a valuable discovery, being of opinion we shall find this lode has not been cut anywhere north of Porter's cross-cut. I have now commenced to put out another cross-cut about 40 fms. further south, where I hope to again intersect it; we shall not be able any further to open on this lode for a few days, being obliged to timber the cross-cut; the water coming from the lode is making the ground fall in. No other alteration in any part of the mine.

FOWEY AND PAR UNITED.—J. T. Bullen: I have inspected the above mine, and I find that there is a new engine-shaft 13 fathoms below the adit, in a beautiful granite stratum; sinking by sixteen men, at 18*l.* per fm. This shaft is of good size, and adapted for the permanent working of the mine. Colman's lode will be intersected in about 6 fms. deeper. There are droppers or branches crossing the new shaft, which must drop into the main lode in depth. There is a winze sinking in Colman's lode in the bottom of the adit, producing some very good work for tin, which I think will open up some very good ground. The old men have worked very extensively in the backs of the lodes, and must have returned large quantities of tin. The engine-shaft has been sunk in a very good position, and the engine will prove the mine to a good depth. Every operation is being carried on in a miner-like and efficient manner.

FOWEY CONSOLS.—F. Puckey, T. Sampson, W. Opie, Dec. 23: Bottrall's Lode: In the 270, east of Bottrall's shaft, the lode is now 8 feet wide, containing a little ore throughout, but not sufficient to value. In the 260 east we have driven south, and cut the main part of the lode, which is 1½ foot wide, of a very kindly appearance, composed of quartz and mundic, and producing good stones of ore, with indications of further improvement.—Trathan's Lode: In the 240, east of Bottrall's shaft, the lode is very much improved both in size and quality; we have cut into the lode 3 ft., and have not yet reached the north wall; the lode is composed of quartz, a little mundic, black jack, and producing splendid stones of ore, but as this lode is not cut through we cannot report its size or value: this is looking cheering, as we have driven this end upwards of 70 fms. through unproductive ground. In the 240 cross-cut south we have cut a lode near 2 feet wide, composed of quartz, mundic, black jack, and kindly for producing ore after we get off from the influence of the cross-course.—Hewett's Lode: In the 180, west of Union shaft, the lode is small and poor. In the 200 west the lode is 1¼ foot wide, producing saving work; this end we expect will shortly improve, as we are approaching a good bunch of ore gone down from the level above. In the same level east the lode is 1 ft. wide, also producing a little ore. In the 220 west the lode is disordered, at the present time poor. In the 70 west, north of Pedler's shaft, the lode is 2 feet wide, producing a little black oxide and yellow copper ore. The lode in the rise in back of the 60 east is 2 ft. wide, and will yield 1 ton of ore per fm., worth 9*l.* per ton. In the 50 west the lode is 3 ft. wide, and will yield 1¼ ton of ore per fm., worth 10*l.* per ton. The ends in John's lode are still poor.

GARREG.—W. Sandoe, Dec. 24: In the 20, going west from new shaft, the lode is 1 ft. wide, producing a slight mixture of lead ore, culamine, &c. The stopes in the back and bottom of this level are each just as when last reported on, producing good dressing ore stuff, and are very promising. The old lode in the level driven north from the trial-shaft, we have started to sink a sump on what I hope will prove to be the lode; we have a regular footwall, with fine spots of lead ore, carbonate of lime, &c.

GAWTON.—G. Rowe, Dec. 21: Our progress in clearing stuff and securing the bottom level during the past week has been very satisfactory, having advanced sufficiently to give good ventilation to the workings throughout the mine, and commence tramming and drawing the ore to surface which was broken previous to the ore being cut, which filled the mine. We have taken down the south part of the lode in the 36 west, about 4 ft. wide, to the west of a small sparry cross-course, but not yet through it, and find it contains capel, spar, mundic, and good quality yellow copper ore—in fact, a very kindly lode, and exceedingly wet, consequently slow of progress. The lode in the stopes in back of this level has not been taken down during the past week.

GREAT BRIGAN.—T. Trelease, Dec. 21: North Treskerby lode, in the deep adit level, driving west of Trevenning's shaft, is from 4 to 5 ft. wide, producing good stones of ore of a kindly appearance; set to three men and three boys, 3 fms. or the month, at 90s. per fm. In cross-cutting north to the east of the above shaft we have intersected the main part of this lode, which is 1 ft. wide, with spots of copper ore; set to drive east on its course to three men and three boys, 2 fms. or the month, at 130s. per fathom. Trevenning's lode, in the deep adit level, driving west of Oate's shaft, is 18 in. wide, with a leader of ore on the south wall 2 in. wide, and likely to improve; set to three men and three boys, at 80s. per fm.; these are the only three bargains set yesterday, in consequence of being over powered with water at trial and whim-shafts; the water at these shafts is now up to the shallow adit level, and the pitch I set last week at 7s. in 1*l.*, is now suspended in consequence. The water at our engine-shaft is sunk below the adit level 3½ fms., but finding the water not being drained in this mine by Great North Downs engine so fast as expected, we have determined to put our new 70-in. engine to work as soon as the drop-lift is sent down, which I hope to complete by Tuesday evening next; this will greatly facilitate the draining of both mines.

GREAT CARADON.—F. C. Harpur, Dec. 21: No very material change has taken place in the shaft since last report; the ground continues to be moderately easy for sinking, and the men are making pretty good progress. We have just passed through a large branch, carrying quartz, peach, and mundic, letting out a quantity of water.

GREAT NORTH DOWNS.—T. Trelease, Dec. 21: The draining of this mine in the past week has been greatly retarded by a failure taking place in the deep adit level, with some few stoppages of the engines in changing boxes, &c., but I beg to say the adit is, or appears to be, in good repair, and everything in good working order again. The water is just the same level now as when I wrote you on Thursday, in consequence of changing the two boxes, and have had the misfortune of losing one of the valves to-day. We now hope to go on forking again with good speed, especially as we have decided in putting the Brigan engine to work, which we hope to do by Tuesday next.

GREAT RETALLACK.—W. H. Reynolds, Dec. 24: We got the engine to work on Saturday, as I wrote you I expected to do, and the water is again below the 45. The blende pitches have not been idle, as the water did not quite rise up to the 35, but found its way to the engine-shaft of the adjoining mine. I find that the parcel of blende, computed 450 tons, bids for which you will receive on the 30th, will be nearly 500 tons.

GREAT TREVEDDOE.—James Polglase, Dec. 21: We have forked the water to the bottom of the old men's shaft, or winze, and commenced clearing the stuff from the level. We find good stones of copper in this shaft; the attle will produce tin.

GREAT WHEAL ALFRED.—W. Bugelhole, J. Delbridge, Dec. 24: Copper-house Shaft: The lode in the stope in back of the 220 is worth 18*l.* per ton. The lode in No. 1 stope in bottom of the 210 is worth 16*l.* per fm.: No. 2 is worth 14*l.* per ton. The lode in No. 1 stope, in back of this level, is worth 12*l.* per ton. No. 2 is worth 18*l.* per fm.; No. 3 is worth 30*l.* per fm.; No. 4 is worth 12*l.* per ton, and No. 5 is worth 14*l.* per ton. The lode in the end driving east on the north branch, above the back of this level, is worth 15*l.* per ton. The ground in the 160 cross-cut south is harder than usual. We are doing all we possibly can to sample the tinstuff at the earliest date.

GREAT WHEAL BADDERN.—J. Hampton, J. Jenkin, Dec. 20: We have driven west on the lode nearly 3 fms., and have proved it to be very regular, and underlying north, the contrary way to the main silver-lead lode. We learn from this two things—first, that it cannot be our principal lode, and second, the two lodes must unite, at which place we can scarcely see how they can fail to make a good lode; we have, therefore, set the cross-cut to drive north by eight men, at 12*l.* per fm. The lode we have been driving on varies in size from 6 to 15 in., and is composed of silver-lead, jack, quartz, &c. —a promising lode, but we do not feel ourselves satisfied in not driving further north to cut the old Baddern lode, especially as the lode described above is not only underlying into it, but is carrying its head fast towards it going west, or towards the old mine; we may possibly resume driving this end again shortly, which is very promising, and letting out water. We have just sold a parcel of tinstuff from the old mine, which will doubtless have more attention during the coming summer. Should we get a little more dry weather we intend, if possible, to commence operations at Landon's shaft, where we expect but little to do to cut a good lode.

GREAT WHEAL MARTHA.—H. Rickard, Dec. 26: The ground in the 52 cross-cut remains without alteration since last week—good for driving. We have dropped our large lift to the bottom, preparatory to cutting the lode. The lode in the stopes in the back of the 40 is much as usual. Thomas's shaft is sunk within 4 feet of the back of the 40; this piece of work will soon be accomplished. The lode in the 20, west from Thomas's shaft, is producing some good work, and is likely for a speedy improvement. The tribute pitches are much the same as for some time past. We are busily engaged in dressing and carting away the ore for next sampling, which will be about 250 tons, of just the same quality as the last. We sample 100 tons of coppery mundic (computed), on Tuesday, for sale on Jan. 2. I hope to ship a cargo of coppery mundic on Tuesday next, sold Dec. 18. All the machinery is working well.

GURLYN.—W. W. Martyn, J. Rees, Dec. 24: The engine-shaft will be sunk to the 70 within a week from now, when no time will be lost in opening out east and west on the course of the lode. The ends and stopes in this part of the mine are much the same as last reported on. Wheal Fox is drained 7½ fms. below the 10, the shaft enlarged, divided, and cased down to the 10, and every effort is being made to reach the 20 in the least possible time.

HAWKMOOR.—J. Richards, J. T. Phillips, Dec. 24: The lode in the stopes in back of the 25, east of Rowe's rise, is worth 1¼ ton of copper ore per fm.—West Hawkmoor: The adit level, driving west on No. 2 lode, produces a small quantity of copper ore of good quality. The 50 has been set to drive west, also a rise in back thereof, and we shall shortly commence driving the 30 west also, as instructed.

KELLY BRAY.—S. James, Dec. 21: The lode in the 75 east is 4 ft. wide, but not quite so productive as when I last wrote you, owing to there being a patch of killas met with, which has disordered the lode for a time, but we hope it will be of short duration, as the end is now yielding 2 tons of ore per fm. The lode in the pitch in back of the same level is worth 20*l.* per fm. No lode has been taken down in the 35 east during the past week, but we have cut into it, and find the lode is upwards of 3 ft. wide, and producing good stones of ore—a strong kindly lode. The tribute department is much as usual.—Eastern Mine: The lode in the 70 east is 2 ft. wide, composed of quartz, fluor-spar, and good stones of ore—a kindly lode, and showing indications of a further improvement ere long; the end is strongly mineralised with branches, containing copper ore, dipping towards the lode. There is about 5 fms. further to drive the above-named end to reach the winze which was commenced in the bottom of the 60, which we hope to complete by the end of January if the same favourable ground continues. The lode in the 60 east is poor at present. We are getting on well with the dressing of ore for the next sampling, and hope to have upwards of 140 tons to sample on the 27th inst.

LADY BERTHA—Capts. Harpur and Metherell, Dec. 23: In the 53 west the lode is composed of quartz, iron, and mundic, intermixed with ore, and letting down a quantity of water; in the same level east the ground is rather hard, the lode being from 2 to 3 ft. wide, carrying quartz, iron, and stones of ore. The lode in the 41 west is looking more encouraging than it has for some time past, being about 2½ ft. wide, composed of peach, mundic, and ore, saving work. The lode in the stopes in back of the 41 west is large, consisting of ore and mundic, worth 9*l.* of the former 3 tons, or 9*l.* per fm.; the pitch in back of this level continues to yield as much as for some weeks past; the lode is composed of capel, mundic, and ore, worth of the latter 30*l.* per fm. In the 30 east the lode is about 3 ft. wide, composed of peach, quartz, mundic, and ore, worth of the latter 3 tons, or 9*l.* per fm.; the lode in a pitch in back of this level is much improved, composed of peach, mundic, and ore, worth of the latter 6 tons, or 24*l.* per fathom. No change in the 10 east; the pitch in back of this level is still worth 30*l.* All the other pitches are producing a fair quantity of ore.

LLYWERNOG.—M. Barbery, J. Lester, Dec. 26: The 40-feet wheel is now on the mine, and the masons are progressing well with building the wheel-pit to receive the same. Every endeavour is being made to get on, so as to keep ahead of the frost, which may be expected to set in.

MAUDLIN.—J. Tregay, Dec. 21: The shaftmen have been engaged during the past week in putting in bearers, &c., and heaving the bottom lift into the cistern, preparatory to sinking the shaft. We shall commence putting in penthouse on Monday.

MERLLYN.—W. Sandoe, Dec. 24: The eight men who were employed in driving the bottom end, east from new shaft, previous to our cutting water there, are now driving north on the cross-course at the adit level; here the ground is both easy for driving and of a most promising character; we have driven about 2 fms. in the past week, and, judging from the fine stones and strings of lead ore we have in driving, I doubt not but it will soon lead to something better. In the 20, going east from new shaft, towards the north and south lode, the ground for the past few days has been a little harder, but to-day we have cut into a branch of carbonate of lime, clay, &c., about 1 ft. wide; this is probably part of, or belonging to, the lode, but if so, it cannot possibly be more than part of it, as the lode before us is well known to be on an average from 20 to 30 ft. wide; a very short time now, however, will prove this point, and I have still the greatest hopes of the result being favourable.

MICHELL.—W. Sandoe, Dec. 14: At No. 4 shaft the water during the past fortnight has become two powerful for us to continue operations in the bottom of the shaft, and I have now put the men to drive east a fathom or two on the course of the lode above the power of the water, with a view to intersect the north and south lode, which I believe to be a little east from the shaft. The new trial shaft, near to No. 3 shaft, is down about 5 fms.; sunk in most favourable-looking ground, principally carbonate of lime, clay, limestone, &c., but so far it seems to be unsettled, and no regular lode as in the other shaft sunk appears yet.

MOLLAND.—T. Bennetts: The lode in the engine-shaft, sinking below the 52, is 1½ ft. wide, underlying north about 1½ ft. in a fathom, and producing ½ ton of ore per fathom for the length of the shaft. The lode in the stopes in back of the 42 east is large, producing 1 ton of ore per fm., and looking promising for an improvement. The stopes in the high back of the 32 east are producing 1 ton of ore per fm. We have discovered a good branch of ore gone off in the south side in the back of this level, taking horse about 3 ft. wide from the main lode, and which is producing at present 1¼ ton of good ore per fm.; six men are employed here driving on it, and stoping away the ore. Our parcel of ore will be taken to Barnstaple, and divided by Tuesday next, if all be well.

NANTEOS AND PENRHIW.—H. Boandy, W. Paull, Dec. 24: No change has taken place to notice in either the 30 east or the 10 west since our last report. The pitches throughout the mine are yielding fair quantities of ore. Our machinery and everything here is in good working condition.

NANT-Y-IAGO.—J. P. Roach, Dec. 21: During the last week the lode in the 10, west of shaft, was of a productive character, and yielding good saving work for ore and blende; it has now entered what we consider to be a branch of the cross-course, which has split and rather disordered the lode; the lode in the end is still orey, and we hope, from its present appearance, to be able to easily find it on the other side of the cross-course. In the stope above the 10, west of rise, west of shaft, the lode is not quite so good as last reported. The present yield of ore is about 1 ton per fm.

NETHER HEARTH.—W. Vipond, Dec. 21: We have not seen anything to notice in the 10 this week; the wheel was stopped last night with frost. We have begun driving on the vein east; in the cross-cut north it is producing saving work.

NEW WHEAL FRANCES.—C. Carkick, J. Tredinnick, Dec. 24: Dunsford's engine-shaft is down 9½ fms. below the 10 fm. level; the lode in the bottom of the shaft is 1 ft. wide; tinning work throughout. This shaft will be sunk to a 20 fm. level early in next month, when we shall immediately commence driving on the lode at that level, and have no doubt but we shall open valuable ground in driving east, towards the winze sunk in the bottom of the 10 fm. level, and about 10 fms. east of the shaft. In the stopes in the back of the 10 fm. level, east of engine-shaft, the lode is 1 ft. wide, and worth 12*l.* per fm. No other change to notice on this lode. The north shaft, on blue lode, is sunk from surface 11 fms.; the lode in the same is 18 inches wide, composed of capels and brent, and contains a little tin; the stratum is a soft granite. This lode is producing a large stream of water, which proves it to be a strong lode, and we are daily expecting an improvement. The shaft is sinking by six men, at 12*l.* per fm.

NORTH BASSET.—T. Glanville, G. Davey, Dec. 20: Tutwork Setting: The flat-rod shaft to sink under the 142, by nine men, at 45*l.* per fm. The 142 to drive east of the flat-rod shaft, by four men, at 10*l.* per fm. The winze to sink under the 132, east of the flat-rod shaft, by four men, at 4*l.* 10s. per fm. The 102 to drive west of Lyle's shaft, by eight men, at 20*l.* per fm. The 92 to drive east of Grace's shaft, by four men, at 5*l.* per fathom. The 92 to drive west, by four men, at 10*l.* 10s. per fm. The 82 to drive west, by four men, at 9*l.* per fm. The 82 fm. level cross-cut to drive south, by four men, at 25*l.* per fm. The 62 to drive west, by two men, at 4*l.* per fm. The 52 fm. level cross-cut to drive north of Grace's shaft, by four men, at 12*l.* per fm. The 42 fm. level cross-cut to drive south of the western shaft, by four men, at 10*l.* per fm. The 42 to drive west of the north shaft, by four men, at 6*l.* per fm. Our sale of tin ores on the 17th inst. realised 176*l.* 0s. 6d., and we shall sample on the 26th, computed, 107 tons of copper ore.

NORTH BULLER.—J. B. Delbridge, Dec. 20: We put the plunger-lift to work last night at the 78, and we have taken all the pitwork from the 78 to the 100 to the surface and the timber. Our engine is now working two strokes per minute; at present the engine, rods, and pitwork, are working well. There is no change to notice in the 78 fm. level cross-cut or King's shaft in the past week.

NORTH HAFOD.—A. Francis, Dec. 24: After trenching for the lodes in different places we commenced opening an old level on Spargo's lode; this level we cleared for about 15 fms. in length. At the mouth of this level Spargo's lode was intersected by another lode, and which, by continuing on its course for about 8 or 10 fms., would form a junction with the rich and celebrated Frongoch lode, which has been discovered in this grant about 50 fms. west of the old level alluded to, and its component parts in the back precisely similar to that on the back of the lode in the Frongoch Mine; in fact, so similar that the best miner in the kingdom cannot identify the one from the other. Under these circumstances, it was thought desirable to sink on the junction of Spargo's lode with the lode crossing it, and at any depth that may be thought most advisable to drive out and prove the Frongoch lode; for this purpose a 12-ft. wheel, 15 in. in breast, has been erected, the rods on the mine with pulleys, and everything necessary for starting the machinery in a few days. The engine-shaft has been commenced and properly secured, with a shed for shelter of the men, and the shaft sunk under the level between 2 and 3 fms., where the lode is from 5 to 6 ft. wide, composed of carbonate of lime, gossan, and stones of lead ore, with every indication of our soon entering a great body of that metal. A changing-house and smiths' shop have been erected, and everything put in good order for carrying on this work with energy and dispatch, and which will receive the greatest attention.

— R. Williams, Dec. 25: We have began sinking the engine-shaft now on Spargo's lode, and from the nature of the ground we hope to run down 10 fms. with considerable speed. We shall next week set the shaft to complete 10 fathoms deep, and hope by so doing to secure more than ordinary dispatch. The wheel is on the pit, and we hope to have everything in train as it may be required; and I trust I may soon be able to report some important discovery.

NORTH HERODSFOOT.—R. Pascoe, Dec. 24: During the past month the adit cross-cut has been driven 4 fms. 0 ft. 9 in.; I have re-set it for the ensuing month at 5*l.* per fm. The ground is still of the most promising description (a beautiful blue killas). I have no doubt the lode, when met with, will be found a productive one, and from the bearing of the lode in Herodsfoot we cannot have much further to drive before reaching it.

NORTH LAXEY.—J. Horsley, Dec. 21: We have taken the vein down again in the shaft, it looks as well as ever; we have about 2 feet wide of good brangled lead in the middle of the shaft; the ends are not altogether so good; the vein continues about 3 ft. wide, and looks promising. We will sink as deep as we

ground already driven through, which we expect to do in the coming month, there being but a few feet to sink and drive to effect a communication, when we shall be able to stope the productive ground already discovered, and open upon the lode both north and south. We have also experienced a series of smaller breakages of our stamping machinery, neither of which being in itself of any serious importance, but taken collectively have interfered very seriously with our stamping, thus affecting our tin sales, and keeping them still lower than they otherwise would have been; we believe this part of the machinery is now in good working order, and hope during Christmas to get through some of the present accumulation of tinstuff.

PENDEEN CONSOLS.—W. Eddy, J. Warren, Dec. 21: The sump-shaft is now sunk 6 fms. below the 130; lode now 2 ft. wide, 1 ft. saving work for tin, worth 10*l.* per fm for the length of shaft. The 130 north is driven 3 fms. 1 ft. 6 in.; no lode taken down. The 130 south is driven 1 fm. 4 ft. 8 in.; lode 2 ft. wide, yielding stones of grey ore. The 118 north is driven 4 fms.; lode yielding 2 tons of ore per fm. The 118 south is driven 3 fms. 1 ft., producing some saving work. The winze in bottom of the 106 south is sunk 2 fms. 3 ft.; lode large, yielding some saving work for tin and copper. The stopes throughout the mine are not producing so much ore as they have for some time past. The 106 north is driving by six men, and the 94 by six men. The lodes we shall be able to report to you their value in a week or two.

PENGENNA.—E. Hitchens, Dec. 18: At the south part of the mine we are driving on the cross-cut from the river to intersect the south lode; we have driven about 6 fms., and I should think 12 fms. more would intersect the lode; the ground in the end is very much altered; close killas, branches of spar, and streams of water coming out of the end; these branches are composed of spar, mundic, and gossan, some of them are still underlying west, and some underlying east; I have set to the men 6 ft. for 1*l.* 11s. 6d. per fm. At the adit end we are still cutting into the lode. The north side we have cut through one lode or part of the lode, and now we have intersected capels, but I believe that the main part of the lode is in the side still; I believe that this is the capel between the two lodes, as we have elvan the north side of the lode for many fathoms in driving; beautiful elvan, quite congenial for lead; this lode, or part of the lode, is from 18 in. to 2 ft. wide, composed of lead, priany spar, and mundic—a beautiful-looking lode, but at this point I believe there are more lodes in the north side. There are streams of water oozing out of the lode, the direction of which is about north-east.

PENHALLS.—R. Pryor, J. Gribble, Dec. 21: Engine-shaft: In consequence of the increased quantity of water caused by the late heavy falls of rain, we have not made much progress in the bottom part of the mine during the week, consequently no change worthy of notice has taken place in those bargains since last report. In the 31 west we have still eight men engaged in stoping a piece of ground standing between this level and the old men's workings; this we are pushing on with all speed, as there cannot be anything done towards clearing the old workings until this ground is stoped, so as to lower the water to the bottom of the level, opposite the western shaft. In the 20 east the lode is 2 ft. wide, producing stones of tin, but being at this time disordered by the gossan is not of much value. In the 10 east the lode is 1 ft. wide, producing stamping work. The lode in the winze sinking below this level is 18 in. wide, and worth 6*l.* per fathom.—South Lode: In the 20 west the lode is split into two parts, the north one producing rich stones of copper ore, and the south one chiefly of mundic. There is no change to notice in any other part of the mine.

PENTRE LYGAN.—Dec. 24: We have erected the whim on the new shaft, and we shall commence sinking near the lode in a few days.

POLHIGEY MOOR.—S. Bennetts, Dec. 24: During the past month there has been but little alteration in either the size or quality of the branches south of the south shaft.—North Lode: Treffry's shaft maintains its size westward—1½ to 2 ft. wide, producing good stones of tin; eastward it is not more than 4 in., but good work. The lode south of this shaft has improved, and continues 4 to 6 ft. wide, more or less disordered, yet containing very good leaders of tin, varying in width from 1 in. to 1 ft.; one of those leaders in the west end is now over 1 foot wide, and worth 10 to 12 cwts. of tin per 100 sacks, besides other smaller branches of good work throughout. The tinstuff is now fast accumulating at the surface, and at the next committee meeting the propriety of at once proceeding to erect some stamping machinery will no doubt be considered.

PROVIDENCE.—W. Hollow, P. Rogers, Wm. Dunstan, Dec. 24: Higg's Shaft: The lode in the 75 east is worth 4*l.* per fm. In the stopes in the bottom of the 75 the lode is worth 14*l.* per fm. The lode in the 65 east is producing tinstuff of low quality. We have commenced operations in our No. 2 carbona south by driving east on a branch, which is producing tinstuff of good quality; there is not opened sufficient to give it a valuation per fm.—New South Lode: The lode in the 75 east is worth 20*l.* per fm. The lode in the 65 east is disordered by a cross-branch. The lode in No. 1 stope, below this level, is worth 130*l.* per fm. In No. 2 stope the lode is worth 100*l.* per fm. In No. 3 stope the lode is worth 35*l.* per fm. The lode in the 55 is worth 5*l.* per fm., with a promising appearance.—Little Wheal Speed: The lode in the 75 west is worth 10*l.* per fm.—Dunstan's Shaft: The lode in the 55 east is worth 7*l.* per fm. The lode in the 45 east is worth 8*l.* per fm. The lode in the 35 east is worth 5*l.* per fm. In the 24 east we are cross-cutting north to cut the north lode. The following is an abstract of settings on Friday last:—Ninety-eight men on tribute, at an average of 8s. 3d. in 1*l.*; and fifty-eight men on tutwork. Our last month's samplings of tin were quite as much as the preceding one. Our present average tribute is about the same.

PROSPER UNITED.—W. H. Martin, W. Millett, Dec. 26: The water at Hoskings' engine-shaft is drained 6 ft. below the 40, and the shaft clear of rubbish below that level; the sumpmen are engaged cutting it down with all speed. In the 40, east of Louisa's shaft, we have commenced a cross-cut to intersect the lode north of the elvan. The lode in the ladder-road shaft is 3 ft. wide, worth 20*l.* per fm. for tin. The lode in the 30, west of the above shaft, is 6 ft. wide, 3 ft. of which on the south part is being driven on, and will yield 6 tons of copper ore per fm.; the north part, which is the tin course, has not been taken down during the week. The lode in the rise in back of the 30 is 4 feet wide, worth 40*l.* per fm. In the 20, west of ladder-road shaft, the lode is 5 feet wide, producing stamping work for tin. The lode in the 30, west of Henry's shaft, is 3½ feet wide, worth 25*l.* per fm. There is no particular change to notice in any other bargain. The machinery throughout the mines is working satisfactorily.

REDMOOR.—T. Taylor, Dec. 23: During the past month we have driven the 80 west, on Johnson's, 3 fms. 0 ft. 6 in.; throughout this drivage the lode is about 2 ft. wide, worth about 9*l.* per fm. At this point we reached Pomeroy's cross-course, and rose on its course 2 fms. 5 ft.; no lode being taken down; set to six men, at 4*l.* 15s. per fathom. To effect a communication as soon as possible we are now sinking a winze in the bottom of the 70; set to six men, at 6*l.* 10s. per fm.; there is some good tribute ground around this point, which cannot be advantageously worked until holed. In the 70 rise, on Pascoe's cross-course, we have only rose 3 fms. 2 ft. 10 in., instead of which I expected to have gone up 2 fms. per week. Just after the last setting-day the cross-course became much harder, sparry, and larger—now set to four men, at 6*l.* per fm. In the 40, on Pascoe's cross-course, we have sunk a winze 6 fms. 5 ft. 3 in.; no lode of any consequence being taken down, our object is to get through as fast as possible—set to nine men, at 7*l.* 10s. per fm. After these communications I think the mine will be in a better position than I have seen it before.—Tribute: The 80 is set to four men, at 11s. 6d. in 1*l.*; the 70 is set to two men, at 12s. in 1*l.*; the 60 is set to four men, at 12s. in 1*l.*; the 50 is set to two men, at 13s. 4d. in 1*l.*

ROSEWARNE CONSOLS.—J. Berryman, Dec. 24: The 30, east of Ellen's shaft, is very much improved, being now worth 7*l.* per fm., and showing indications of a further improvement. The 20, east of the above shaft, is also improving; the branches are uniting together, and producing rich stones of ore. The tribute pitches are yielding a fair quantity of copper ore, and the men getting good wages.

ROSEWARNE UNITED.—H. Woolcock, Dec. 26: In the 90, west of footway-shaft, the lode is 2 feet wide, unproductive. In the 90, east of Jennings's shaft, the lode is 2½ ft. wide, producing stones of ore. In the 80, west of footway-shaft, the lode is 2 ft. wide, unproductive. In the 80, east of Jennings's shaft, the lode is 3 ft. wide, opening tribute ground. In the 74, west of Richards's shaft, the lode is still small and the ground hard. In the 58, west of Richards's shaft, in the end we are cross-cutting north, the lode as far as seen is of a very promising appearance, producing good work for tin and copper; we have cut into it about 3 ft., but no north wall, though we have not seen sufficient as yet to ascertain its value. In the 46, east of Lane's shaft, the lode is 20 in. wide, producing a little ore. In the 34, west of Bush, the lode is 12 in. wide, unproductive. In the 34, east of Wellington's shaft, the lode is 2 feet wide, producing stones of copper and tin. We are driving west of cross-cut, north of Wellington's shaft, at the 34; the lode is 20 in. wide, with a very promising appearance, producing stones of lead, copper, and a little tin. The tribute department is looking much as usual.

SORTRIDGE CONSOLS.—R. Jackson, Dec, 26: In the 40, west of Williams's rise, on the north part of the main lode, the lode is worth 2 tons of ore per fm. In Jenkins's rise, in back of the 40, east of eastern shaft, on the north part of the main lode, the lode is 2 ft. wide, yielding good stones of ore, and looking very promising for further improvement. In Gilbert's winze, sinking below the 50, on the south part of the main lode, no lode has been taken down. In Mayn's stopes, in back of the 50, on the south part of the main lode, the lode is worth 2 tons of ore per fm. In Crew's stopes, in bottom of the 40, on the south part of the main lode, the lode is worth 2 tons of ore per fm. In Gribbon's rise, in back of the 40, on the south part of the main lode, no lode has been taken down this last week. In Stanton's stopes, in back of the 40, on the south part of the main lode, the lode is worth 2 tons of ore per fm. In the 30, east of White's cross-cut, on the south part of the main lode, the lode is 3 ft. wide, yielding stones of ore occasionally. In Dunn's rise, in back of the 20, west of Arthur's cross-cut, no lode has been taken down this last week. There is no alteration to notice in any part of the mine.

SOUTH CARADON WHEAL HOOPER.—W. C. Cock, Dec. 21: We have commenced driving the 90 cross-cut north, and find the ground to be hard. The 90 west, on No. 3 lode, and the rise above the 62, on No. 7 lode, are without any alteration. The lode in the winze, below the 47, is spotted with copper ore. In the 47 cross-cut north we are not yet through the elvan course.

SOUTH CARN BREA.—T. Glanville, Dec. 24: There is no alteration in our underground department to report on. We sold to Carvedras Smelting House, Truro, on Dec. 21, 7 tons 17 cwts. 2 qrs. 13 lbs. of black tin at 66*l.* 15s. per ton=526*l.* 1s. 5d.

SOUTH CONDURROW.—Dec. 21: The engine-shaft is now down 5 fms. below the 40; lode from 5 to 6 ft. wide, composed principally of spar and peach, thickly impregnated with mundic and copper ore; set at 15*l.* per fm. In the 40 east it is about 5 feet wide, composed of spar, mundic, and copper ore, and just of the same appearance as the lode in the engine-shaft; driving at 4*l.* per fm.; we may here add that the lode continues to improve in depth, as to size and appearance. The lode in the adit, west from the engine-shaft, and east from Thomas's shaft, is just of the same appearance as last reported; driving east from Thomas's at 2*l.* 10s. per fm.; west from engine-shaft at 4*l.* per fm.; we hope to communicate these ends in about one month; the part we are carrying in the adit, west from the cross-cut, on the tin lode, is from 4 to 5 ft. wide, composed of peach and capel, with a little tin, but at present not to value; set at 6*l.* per fm.

SOUTH CRENVER.—E. Chegwin, Dec. 23: In the flat-rod shaft sinking below the 105 the lode is 2 ft. wide, producing good stones of ore, but not to value. In the 105, east of flat-rod shaft, the lode is 2 ft. wide, producing 1 ton of ore per fm., and ground favourable for driving.—South Mine: In the 51, east of cross-cut, the lode is 2 feet wide, producing good stones of tin, mundic, and spots of copper ore. In the 51, west of cross-cut, the lode is 2½ feet wide, producing good tinstuff, improved in the past week. In the winze sinking in bottom of the 32 the lode is 2½ ft. wide, producing good tinstuff, worth about 9*l.* per fm. In the rise in back of the 32 the lode is 2½ ft. wide, producing good tinstuff, worth 5*l.* 10s. per fm.

SOUTH DOLCOATH AND CARNARTHEN CONSOLS.—Wm. Roberts, Dec. 24: In the 50 east the lode continues 2 ft. wide, producing stones of good ore.

SOUTH LADY BERTHA.—R. Unsworth, Dec. 26: In the 40 east the lode is 2½ ft. wide, producing good stones of copper ore. In the stopes east of Leaman's rise the lode is 1½ ft. wide, worth 1½ ton of copper ore per fathom. In the stopes west of Leaman's rise the lode is 3 ft. wide, worth 2 tons of ore per fm. In the rise in back of the 40, behind the shaft, the lode is small and poor; we are pushing on this rise with all possible speed, which we hope to hole to the 30 this month; when done we shall commence to sink to the 52 as fast as we possibly can.

SOUTH TOLGUS.—Dec. 24: Youren's Lode: The lode in Michell's engine-shaft is 15 in. wide, composed of peach, spar, and mundic. In the 130 west the lode is 16 in. wide, composed of peach and flookan. The lode in the 120 west is 16 in. wide, worth 1½ ton of ore per fm. The two stopes in the back of the above level are each yielding 2 tons of ore per fm. The lode in the 110 west is 20 in. wide, yielding 2 tons of ore per fathom. The lode in the winze, sinking in the bottom of the 110 west, is 15 in. wide, opening tribute ground. In the 100 west the lode is 2 feet wide, worth 1 ton of ore per fathom. The rise in the back of the 100 west is yielding 1 ton of ore per fm.; and the winze sinking in the bottom of the 100 west is yielding 2 tons of ore per fathom. In the 90 west the lode is 10 in. wide, producing stones of ore. The lode in the 78 west is 1 ft. wide, composed of peach, mundic, and spar.—South Lode: In the 130 east the lode is 2¼ feet wide, composed of mundic, spar, and stones of ore. The lode in the 120 east is 2 feet wide, consisting of spar and good stones of ore—a kindly lode. In the 110 east the lode is 18 in. wide, composed of spar and stones of ore, opening tribute ground. The two stopes in the back of the above level each yield 2 tons of ore per fathom. In the 100 east the lode is 2½ feet wide, composed of peach, spar, mundic, and good stones of ore, and is promising for improvement.—North Lode: In the 90, west of Michell's engine-shaft, the lode is 2 ft. wide, composed of mundic, peach, and spar.

ST. IVES WHEAL ALLEN.—H. Taylor, Dec. 26: The lode in Giesler's engine-shaft, sinking below the 50, is 9 in. wide—unproductive. The 50, east of Giesler's shaft, on the carbona lode, in the sump-winze, is 2 ft. wide, worth 4*l.* 10s. per fm.; this lode has a very promising appearance. On the carbona lode, 11 fathoms west, we have not reached the end of the vugh. In the 45, east of the sump-winze, the lode is 18 in. wide, worth 4*l.* per fm. The lode in the 30, east of Giesler's shaft, is 15 in. wide, worth 20*l.* per fm. At Richards's shaft, on the deep adit, we are clearing west of shaft; the level is full of attle, and the old timber is all decayed. It appears the former workers took away the lode in the back of this level.

TREHILL.—H. Rickard: We have reached the capels of the lode the other side of the cross-course in the 50, west from old sump-shaft, but as yet little has been done; the end is letting out a quantity of water. I hope now we shall soon be in a position to let down the water from the western shaft. The carpenters are busily engaged in making launders to lay down in places in bottom of the 40 to take up all the water that we possibly can at that level. We have made a communication with Rapson's pitch to the 40, and find the lode that the 30 was driven west upon standing in whole ground to the south of the 40. As soon as we have secured the back of the 40, about the slide, we shall commence raising ore; this will occupy only a few days. The whole of the machinery is working well.

TRELOWETH.—T. Richards, Dec. 26: We have changed the tye plunger-pole, which occupied four hours; the engine is now working six strokes per minute, and the water is quite in fork to the bottom of the mine, consequently we may fully calculate upon managing the water very comfortably in the present winter. The 144 fm. level is driven 5½ fms. east of the engine; this end is upon the north side of the lode, and worth for copper ore 9*l.* per fm., whilst we pay for driving it 7*l.* per fm., and it is a good wages places. The 144 end is west of engine-shaft about 2 fms.; this end is also driving in the north side of the lode, worth 5*l.* per fm. The 134 end east is improving in appearance, the lode containing more ore, and a little more water percolating throughout the end; worth for ore 5*l.* per fm. In the 134 end west (although stoping down to make a level), the lode is worth 20*l.* per fm. The 134 end, driving east of the cross-cut, is worth 12*l.* per fm. The sump winze, sinking below the 124 fm. level, is worth 18*l.* per fm. The stope east of sump winze is worth 18*l.* per fm.; second stope east of sump winze is worth 20*l.* per fm.; the stope west of sump winze is worth 12*l.* per fm. In the rise above the 124, west of engine-shaft (which is just over the winze sunk through in the bunch of ore), the lode is worth 12*l.* per fm.

TRENCROM.—R. Hollow, F. Bennetts, Dec. 26: The lode in the 100, east of Giesler's engine-shaft, is worth 2*l.* 10s. per fm. The lode in the 100, west of the engine-shaft, is worth 1*l.* 10s. per fm. The lode in the 90, east of the engine-shaft, is worth 3*l.* 10s. per fathom. The lode in the winze sinking below the 80, east of the engine-shaft, is worth 2*l.* 10s. per fm. There is no change in Hollow's shaft, sinking below the 30. The lode in the 30, east of Michell's flat-rod shaft, is worth 4*l.* per fm. The lode in the 30, west of the flat-rod shaft, is worth 3*l.* per fm. The 100 cross-cut set to drive north-east of the engine-shaft, by four men, at 65s. per fm., on the cross-course, to cut the new lode. In the 60 cross-cut, south-east of the engine-shaft, there is no change to notice.—New Lode: The lode in the 60, east of the cross-cut north, is worth 3*l.* 10s. per fm. The lode in 68, west of the cross-cut north, is small at present, of a character for improvement.

TREVENEN.—J. Webb, Dec. 24: The shaftmen have been going on favourably sinking the last week; the lode continues just as reported before. The stopes in the 170 are yielding good tin, varying from 12*l.* to 20*l.* per fm. The 170 east is at this time being driven through a run of whole ground, rather delaying our progress going eastward; I am almost impatient for getting in this level, in order to take up the eastern water; we cannot do our intended work below the 170 before that is done. The 150 is going on westward towards the whim-shaft still in the old workings. The 140, west of Tremenheere, is yielding good stamps' work; we are laying open good prospects here for the deeper level coming forth under it.

TREWEATHA.—Dec. 24: The lode in the 30 north is not looking quite so well as it did last week—worth at present about 2 cwts. of lead per fathom. We have finished securing the run at this level south to-day; and we shall resume the driving at this end south by Thursday; the lode in the present end is worth about 2 cwts. of lead per fathom. The ground in the cross-cut east at this level is somewhat harder, and rather spare for progress. The stope in the back of the 15 south is worth at present about 2½ cwts. of lead per fm.

TRUMPET UNITED.—G. R. Odgers, Dec. 21: The lode in the western end of the engine-shaft, sinking below the 25, is 8 in. wide, and from which I broke to-day some good stones of tin; this lode is improving. The lode in the 25 west is 9 in. wide, yielding good stones of tin, also improving. In the 15 west the lode is from 9 to 10 inches wide, composed of quartz, &c.; a little granite has come into the lode, but which I am happy to say is wearing out. I took a fair sample of the last taking down, and it produced good work, which I estimate was worth 10*l.* per fm., and I think the next taking down will show a decided improvement again, because it is looking more sparry and vughy. Seeing that the lode is improving as we go down, and with the fact of the former company having sold 80,000*l.* worth of tin in ten years, it looks, in my opinion, very favourable for ultimate success.

UNITED MINES (Tavistock).—John Tucker, Dec. 24: The ground in the 72 is still favourable, and good progress is being made towards the point where we hope to find a profitable lode. The quality of our tinstuff is improved. No other change to notice.

VALE OF TOWY.—A. Waters, T. Harvey, Dec. 23: Clay's engine-shaft is cased and divided from the 100 to the 110, and the men are now about to commence opening for piat, &c., at the latter level. We have been delayed in prosecuting the above-named work, the men having had to secure some ground in the hanging wall of shaft at and above the 30. In the 100, driving north of shaft, the lode for the present is small, and not to value; we expect to get into vughy ground in this direction shortly, and probably a run of ore may be met with. In the 100, south of the great cross-course, the lode is 18 in. wide, sparry matter, with blende throughout; we have a large lode before us at this point. In the 90, driving south of Field's shaft, the lode is 3½ ft. wide, composed of barytes, blende, and good solid stones of lead ore—of a promising character. No change in the 80, north of Clay's, since our last. In the new adit, driving south of Nante, the lode is 4 ft. wide, composed of hard barytes, and very similar in character to the vein stuff seen at and about Field's shaft in the upper levels of the old mine. The tribute department is yielding fair quantities of lead ore. Our engines and pitwork are in good condition. The weather is favourable for surface operations.

WEST BASSET.—W. Roberts, Dec. 24: In Grenville's engine-shaft the lode continues 5 ft. wide, producing at least (for the length, 12 ft.) 6 or 7 tons of ore per fm.; it is now 4 fms. 4 ft. below the 94, leaving a good course of ore in each end of the shaft. The 80 west is improved, producing nearly 2 tons per fm. We sampled to-day 480 tons of ore.

WEST DEVON CONSOLS.—G. Rowe, Dec. 26: Our prospects in driving east in the 40, on the south lode, are more cheering than the most sanguine could expect to find at such a shallow depth; the lode is opened up within the last 3 fms. driving to 4 ft. wide, particularly in the bottom of the driving, which speaks well for the next, or deeper level, being composed of every characteristic that any practical miner could expect to see, such as arsenical and sulphur, mundic, friable quartz, light coloured capel and prian, intermixed with good quarterly yellow and coated copper ore, from which a considerable influx of water is issuing through. The stratum in which the lode is embedded is also improved, both in character and for progress. Judging from the present indications, we think it a sufficient guarantee to move in a more vigorous mode of operation even in this part of the property; I also think that we are now in our present driving passing over a very valuable shoot or deposit of ore.

WEST PAR CONSOLS.—H. G. Webb, Dec. 24: During the time we were changing the plunger-poles, on rectifying the pitwork, the water rose to the 45 fm. level; the new plunger-poles are going on well, and I think the water will be in fork to the bottom level by Monday morning. The water is greatly increased since the heavy rains we had a fortnight since; in consequence of the water being in we have not done any work in extending the levels, therefore there cannot be any change since last report. The tributers are getting tin from the 45 fm. level; one party discovered a branch of tin north of the lode, which may be found a separate lode going down.

WEST SHARP TOR.—W. Richards, Dec. 21: The 150 to drive east of Morris's shaft, as directed by the agent, by six men, stented 6 ft. or the month, at 13*l.* per fm., taken by Simon Dennis and Co. The 150 to drive west of Morris's shaft, as directed by the agent, by six men, stented 9 ft., or the month, at 15*l.* per fm.; taken by James Tonking and Company. The cross-cut to drive south in the granite in the 150, as directed by the agent, by two men, stented the month, at 10*l.* 10s. per fathom; taken by John Hawke. The 162 to drive west of cross-cut, on the north part of the lode, as directed by the agent, by six men, stented 2 fms., or the month, at 12*l.* per fm.; taken by Sampson Couch and Co. Morris's engine-shaft to sink below the 162 for a fork, as directed by the agent, by four men, stented the month, at 19*l.* per fathom; taken by John Seymour and Co.

— Dec. 23: The 150 east is being driven upon the north part of the lode, which is chiefly hard and soft gossan, 2 ft. on the footwall being a leader containing spots of crystallised red oxide of copper, a trace of tin, and about 11 or 12 ozs. of silver to the ton of stuff; this is a very encouraging point. The part of the lode being carried in the 150 west is without any particular change; still in hard and soft gossan, and about 2 ft. on the footwall being saving work for crystallised red oxide and native copper. The cross-cut in the 150 is still in favourable granite, containing veins and branches of quartz. We have this day resumed the sinking of Morris's shaft below the 162 for a fork. We have suspended the cross-cut in the 162 for the time, and put the men to drive west upon the leader on the footwall, which is about 2 ft. wide, containing gossan, prian, and quartz, with a little grey copper ore; the other part of the end will be in capel and hard quartz. We are looking forward to a good improvement as the level is extended upon this part of the lode.

WEST SILVER BANK.—A. Francis, Dec. 24: We have finished collaring all the ground at the engine-shaft, so as to prepare for sinking; have put in all the necessary timber for so doing, and have commenced the sinking of it, where, I am proud to say, we have a rich bunch of lead ore, the lode in the eastern end being richer than in the western part of the shaft; and there can be no doubt we shall go down through one great and continuous course of ore. The lode has been seen and opened on a great distance to the west, and is of precisely the same character as the vein in the shaft, so that we may safely reckon on its continuing rich and productive for a great length. The ground for the wheel-pit has been excavated, and the wheel-pit commenced, and the wheel will be quite ready by the time the pit is completed. A shed has been erected over the engine-shaft, 18 ft. by 14 ft., which will shelter the men from the inclemency of the weather, and everything has been prepared for prosecuting the mine with energy and dispatch; and to this object our greatest attention shall be paid.

— R. Williams, Dec. 25: We have finished collaring up the shaft, and are now quite ready for sinking, which we shall commence as soon as Christmas is over. We have fixed a nice wood shed over the shaft, which will enable us to proceed without hindrance. We have suspended all the sloading over the surface, and also the driving of the adit, which had been begun; this latter we think quite unnecessary. The other matters at surface are proceeding, and I hope a comparatively short time will open up a good property. It is our intention to contract for the sinking of 10 fathoms, as one bargain, and to give the men a good price, so as to ensure dispatch; although the men may, probably, get good wages it will be preferable, as much time will be gained.

WEST TOLGUS.—Dec. 24: South Lode: The lode in Taylor's engine-shaft, sinking under the 40, is 4 feet wide, composed of peach, jack, mundic, spar, and good stones of ore—a fine, kindly-looking lode. The same remark will apply to the 65 end, west of Wheal Raven engine-shaft.—North Lode: In the 50, east of cross-cut, the lode is 3 feet wide, unproductive. The lode in the 40, east of cross-cut, is 3 feet wide, producing fully 1 ton of ore per fm. The ground in the 50 cross-cut north is tolerably easy.

WEST WHEAL JANE.—J. Tonkin, J. Smith, Dec. 20: The 10, west of Painter's, continues to look well; the lode is 5 ft. wide, worth 40*l.* per fm. for tin; we are not breaking the mundic on the north part of the lode. Painter's shaft is now down 3½ fms. below the 10. We hope to reach the 20 in about four months from this time; we shall then have about 9 fms. to drive west to get under the present run of tin ground. The lode in this shaft is 6 ft. wide, producing low price tinstuff. In the 70, west of the engine-shaft, the lode is 4 ft. wide, producing good stones of tin, and looking better than we have seen it for the last six months. There is no change to notice in any other part of the mine. We shall sell on Tuesday next about 3 tons of tin, value 200*l.* Our next sampling of tinstuff will be about 3500 sacks (or 425 tons). Our tribute pitches are producing quite as much tinstuff as the last two months.

WEST WENDRON CONSOLS.—Wm. Hosking, Dec. 21: The engine-shaft is sunk 9 ft., plat cut, and now fixing lift, which we expect to complete this evening. The flat-rod shaftmen are now cutting plat, and making all right for fixing a lift at this level. We find the lode 3½ ft. wide, in cutting the plat, and yielding some good work for tin; we are obliged to save all the lode, as there is tin throughout it.

WEST WHEAL TREVELYAN.—J. D. Osborn, Dec. 21: In the 58, driving west, there has been no lode taken down this week. We have not yet found the lode in the 48, driving west. The rise in the back of the 48 is 15 ft. against Charles's shaft; the lode is producing good stones of ore. The stopes in back of the 48 are worth 5*l.* per fm. The stopes in bottom of the 48, east of No. 3 winze, are worth from 12*l.* to 14*l.* per fm. The rise in back of the 38, against Charles's shaft, is 5 ft. wide. We have resumed driving the 28 cross-cut north this week, the branch we drove on being small and poor. The cross-cut in the 20 is communicated to the rise against Charles's shaft; this rise is 3 fms. above the said level. In the cross-cut driving south at Park shaft we have this week cut a branch composed of quartz, iron, and mundic. The cross-cut driving north from adit towards Charles's shaft is driven 5 fms.; the ground is favourable for driving.

WHEAL AGAR.—W. Roberts, Dec. 24: I cannot speak of any improvement in the tutwork bargains since last reported. We have sampled to-day 97 tons of ore.

WHEAL ARTHUR.—T. Carpenter, Dec. 21: We have cut the middle lode, east and west of the cross-course, in the adit level, which is 14 fms. below the 50, where the lode is so productive; the lode in each end is from 20 in. to 2 ft. wide, and yielding fine stones of copper ore: I have every reason to believe we shall have a very productive lode, when we get a few feet off the cross-course.

— T. Carpenter, Dec. 26: There is no particular alteration in either of the lodes since my last report. It is our general setting-day on Saturday next; I will then inform you the value of the lodes, and prices per fathom for driving, &c.

WHEAL CARADON.—F. Pryor, J. Brown, Dec. 18: The following is our setting:—Set the engine-shaft to sink to the 50 fm level, by nine men, at 25*l.* per fm., in which the lode has the appearance of becoming a productive one in depth, composed of peach, prian, spar, and occasionally stones of rich yellow copper ore. As soon as the 50 is reached I hope to be in a position to report of favourable results. Set the 40 fm. level, west of cross-cut, on the south lode, by four men, at 7*l.* 10s. per fm.; lode chiefly mundic, with spots of ore, and letting out a good deal of water. Set the 40 fm. level cross-cut south, by two men; this we are putting out in search of lodes which the shaft intersected in the shallower levels; setting price 7*l.* per fm. Set the lobby to drive west on Mary's lode, by six men, at 6*l.* per fm.; this we are pushing on with all possible speed to drain the trial shaft to prove the lode in depth. We are glad to say, although the heavy falls of rain we have had have considerably increased the water, the engine has forked out the water better than might be expected.

WHEAL CREBOR.—Capt. Gifford, Dec. 24: Saturday last was our setting-day, and the following bargains were let:—The 60 cross-cut north in the east cross-course, west of Cox's shaft, by six men, at 5*l.* per fathom, stented 3 fathoms, or cut the lode. In the cross-cut south, in the 60, east of Cox's shaft, we have intersected two branches or lodes about 4 feet apart; the north one, 12 in. wide, is composed of quartz, capel, and mundic, with spots of copper ore intermixed; the south lode, 8 in. wide, is of much the same character, and I have put two men to drive 2 fms. east on its course at 4*l.* per fm., to prove its character and bearing. The 60 east is suspended for the time, and we have put the men to cross-cut south a few fathoms behind the end, in order to prove whether the branches met with in the cross-cut near the shaft are the main part of the lode; this end is set to four men, at 4*l.* 10s. per fm., stented 3 fms., or cut the lode. The stopes in bottom of the 48 east are set on tribute to three men, at 10s. in 1*l.* The shaftmen are engaged in clearing out a sink in bottom of the 34 west, in the old workings, to see if any tribute ground can be found, but they will commence with the sinking Cox's shaft under the 60 level on Monday, the 30th inst., when I will put two other men to clear out the said sink. The water in the old mine appears to be sinking satisfactorily, as it is fallen off more than one-half in the 48. We shall be ready with our sampling, and hope to have above the computed quantity.

WHEAL CUPID.—R. Pryor, sen., Dec. 21: I have nothing new to report on this week, except the ground is become a little more favourable for driving in the 40 cross-cut south.

WHEAL DAMSEL.—Dec. 20: Setting Report: The engine-shaft to clear, timber, and put in footway below the 40, by nine men, at 7*l.* 10s. per fm. We have 2 fms. more to reach the 50, which we hope will be completed within a fortnight from this time.—Tremayne's Lode: The lode to sink below the adit level, by six men, at 12*l.* per fm., where the lode is 2 ft. wide, and within the last 2 ft. in sinking we have met with a cross-head, which has for the time rather lessened the value of the lode, now worth 14*l.* par fm., with every indication of an improvement.—King's Shaft: The 40, to drive east and west from cross-cut, by six men, at 8*l.* 10s. per fm. The lode in the eastern end is 2½ ft. wide, composed of gossan, prian, and spar, and kindly in appearance. The lode in the western end is 2 ft. wide, and similar in character. We are still of the same opinion, that when these ends get out of the influence of the cross-course they will make ore. No time shall be lost in carrying out the different points now in operation, and we believe after the engine-shaft is communicated to the 50 we shall soon be in a position to report very favourably on some levels towards the great county cross-course. The engine and rods are working in good order.

WHEAL EDWARD.—M. H. East, Dec. 21: The lode at the different points throughout the mine continue to yield much as usual. We are pushing on the cross-cut, &c., with all possible dispatch, and the prospects continue very good.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Dec. 21: The lode in the 110 west is 2 ft. wide, composed of quartz, prian, &c., with spots of malleable copper, and stones of grey ore, letting out water; a kindly lode. The lode in the 100 west is 20 in. wide, composed of quartz, peach, prian, &c., with grey and yellow ore, yielding fully 1 ton of good ore to the fathom, and looking very promising, letting out a quantity of water. The lode in the 90 west is 10 in. wide, composed of mundic, peach, &c., with grey, black, and yellow ore; a kindly lode; these two levels have left the iron entirely. The lode in the 80 east is 18 in. wide, composed of gossan and quartz, with occasional stones of ore; looking promising. There is no alteration in the ground in the 80 cross-cut since our last. The lode in the 80 west is 8 in. wide, composed of quartz and prian, with a little black ore.—Flat-rod Shaft: We have cut through the lode 24 fathoms deep, and we find it from 1 ft. to 14 inches wide, composed of a very friable quartz and prian, with a little black ore; a very kindly lode, but we are very sorry to say that owing to the rain lately we shall be obliged to suspend this shaft for a little while, unless we erect some machinery. In taking the bearing of the lode again to-day, with the underlie, it cannot be far from the 80 cross-cut, and which, for its depth, looks very kindly. In conclusion, we beg to say that having carefully examined the lode in the 100 with the 90, that a very important change has taken place, and which we are of opinion bears a striking analogy to some of the eastern mines, and also the fact of our water increasing so much in the bottom levels, looks, so far as we are capable of judging, a good sign; hence we intend hurrying on the 110 and 100 fm. levels with all dispatch.

WHEAL GRYLLS.—E. Rogers, J. Pope, Dec. 26: Fisher's Lode: Annie's engine-shaft is down 4 fms. below the 20. In the end driving east of this shaft, in the 20, the lode is 2 ft. wide, worth 3*l.* per fm. We have holed the winze in back of the 20, east of flat-rod shaft, and commenced driving east; the lode in the end is worth 3*l.* per fathom. In the 20 west the lode is 2 ft. wide, worth 5*l.* per fm. In the winze in bottom of the 10 east the lode is worth 6*l.* per fm. In the winze east of Gryll's shaft the lode is worth 10*l.* per fm. In the winze in bottom of the adit the lode is also worth 10*l.* per fm.—Georgia Lode: Georgia shaft is down 3 ft. below the adit level; no lode has yet been taken down. The engineers have fixed the bob-cylinder and boiler, and are now waiting on the masons to finish the fly-wheel loading.

WHEAL HARRIS.—J. Pryor, Dec. 19: The drivage east towards the junction of the east and west lode with the lead lode is progressing favourably (ground set at 3*l.* 10s. per fm.), and highly mineralised, with branches of spar, spotted with lead, copper, and mundic; as we started this drivage on the branches to facilitate the progress eastward, and also prove the same for some distance, we have now altered the course a little south of east to get on the lode, which I expect will be done in about 9 fms. driving.

WHEAL KITTY.—R. Pryor, J. Nicholas, W. Higgins, Dec. 21: The lode in the 100 east is 2 feet wide, worth 8*l.* per fathom, and is daily improving; this is an important point, as it is just coming under the run of tin ground met with in the levels above. In the 90 east the lode is 2 ft. wide, worth 10*l.* per fm.; we are daily expecting to cut the cross-course in this end. The lode in the 82 east, which has just got out of the influence of the cross-course, is 18 in. wide, worth about 8*l.* per fathom. The lode in the winze sinking below the 72 east is at this time small, and not of much value. The lode in the rise in the back of this level is 15 in. wide, and worth 7*l.* per fm.—Holgate's Shaft: In the 55 west the lode is 2 ft. wide, worth 8*l.* per fathom, with a good appearance. The lode in the 54 west is 2½ ft. wide, and worth 7*l.* per fathom. During the present week we have cut a small branch of rich tin in the cross-cut driving south of this level, which is dipping south about 10 ft. in a fathom; this end is letting out an increased quantity of water, and is strongly mineralised for about 3 ft. wide, which we consider good indications. Our pay and setting went off well.

WHEAL MARGERY.—R. James, J. Benbow, W. Rogers, Dec. 26: Wellesley's engine-shaft is sunk to the 100; we have commenced driving the 100 both east and west; the lode is large, and of good appearance, with stones of copper ore. In the 90, east and west, and also in the 70 west the lode is not yielding sufficient ore to value. At American shaft, sinking under the 110, the lode is producing some rich yellow copper ore. In the 110 west the lode is poor. In the 110 east the lode is worth 8*l.* per fm. In the 100 west the lode is worth 3*l.* per fathom. In the 100 east the lode is improving in appearance, and ground getting softer for driving. In the 90 and 80 east the lode is poor. We have no change to report on at Highburrow or its neighbourhood.

late heavy floods, which caused the river to overflow its banks in the low places, and filled all the old stream-works with water, which soon found its way down into the mine. I would recommend you to build an embankment in those low places, and fill up all the old stream-pits around the shaft, which would, I think, prevent such an occurrence again. The water is now drained to within 6 fms. of the bottom, and without any unforeseen accident will be in fork by Monday next. About 80 fms. further east I find an adit level has been taken up from the level of the river, and driven south on the course of the lode about 45 fms.; the lode for this distance will average 2 feet in width, underlying east about 15 in. in a fathom, bearing from 15 to 20° east of north; the lode in the end is about 15 inches wide, composed of soft spar, prian, gossan, &c., a very kindly lode indeed for the depth, which is only about 4 fathoms from surface; but in the next 30 fms. driving I should say you will gain at least 30 fms. back, and still further south you will gain backs rapidly. I examined the sett at surface for nearly half a mile south, and I find several lodes of great promise traversing it, most of which are showing a good gossan in the back; and in driving this adit level south you will intersect one or two east and west lodes in about 50 fms. driving, which will be about 40 fms. deep, so that the chances in this direction may be considered good. In the adjoining mine (East Wheal Jane) they have driven through a splendid lode of lead for 25 fathoms in length, and a good lode still holding on in the end now. I may here remark that this bunch of lead is not more than 70 fms. distance from your present workings, and it dips south fast; so that by sinking Wheal Sicily a little deeper success, in my opinion, is all but certain. Your wheel is now draining the country for a considerable distance, but I am informed that the new engine now being erected in the adjoining mine will be set to work in about six weeks from this time, when it will take a good share of the water and greatly assist you, enabling you both to work by mutually assisting each other. Looking at the chances you have in so many lodes, and also at the nature of the lead ore raised from your present workings, and at the fact that the mine can be worked so cheaply, I cannot but consider Wheal Sicily a first-rate speculation, and, in my opinion, it will some day turn out a great prize.

WHEAL TREMAYNE.—R. Williams, J. Williams, Dec. 23: At the boundary engine-shaft, in the rise in back of the 133, on the engine lode, the lode is yielding low price tinstuff; we hope this will be communicated with the level about next week. In the 123, east of Allen's shaft, on Allen's branch, we have intersected a small flookan, which has disordered the branch for the present, home to this point it is worth 20*l.* per fathom. In the skip-shaft sinking under the same level, on Allen's branch, the branch is split, and a little disordered, worth 8*l.* per fm. In the 113 cross-cuts, north and south, we have not intersected anything to notice. The stopes in back and bottom of the same level are worth on an average 12*l.* per fm. In the 103, east of the same shaft, on Allen's branch, the branch is worth 12*l.* per fm.; the stope in back of the same level is worth 10*l.* per fm. The men about the skip-shaft in the 93 and the 103 are progressing favourably with the cutting down and fixing road. The men at the new engine-shaft are cutting ground for bearers and cisterns, and are progressing as fast as possible for the number of hands employed.

WHEAL UNION.—T. Glanville, Dec. 24: We shall sell to-day 13 tons of copper ore.

YARNER.—R. Barkell, Dec. 24: The 40 west is producing saving work; no improvement in the 40 east. The 30 west is improved since the last report; we have again met with the main part of the lode against the south wall, and have cut into it about 15 in., and find it to be composed of ore and peach, a very promising looking lode; the stope in the back of this level, west of Peter's winze, is worth fully 30*l.* per fm.; the stope east of shaft, in back of the same level, is yielding 5 tons per fm.; the winze sinking in bottom of the 30 is worth 2 tons per fm. No alteration in any other place.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, December 27, 1861.

COPPER.	£	s.	d.	
Best selected.....p. ton	110	10	0–	—
Tough cake..... „	107	10	0–	—
Tile ..... „	107	10	0–	—
Burra Burra .... „	103	0	0–(Nom.)	
Coplapo ..... „	—	—	—	
Copper wire .....p. lb.	0	1	2	– —
ditto tubes ..... „	0	1	2	– —
Sheathing & bolts .. „	0	1	0	– —
Bottoms ..... „	0	1	1	– —
Old (Exchange) .... „	0	0	10¼	– —

IRON.	Per Ton.			
Bars, Welsh, in London..	6	5	0–	—
Ditto, to arrive	6	0	0–	—
Nail rods	7	0	0–	—
„ Stafford. in London	7	0	0–	7 10 0
Bars ditto	7	5	0–	8 0 0
Hoops ditto	8	10	0–	9 0 0
Sheets, single	9	0	0–	9 10 0
Pig, No. 1, in Wales ..	3	0	0–	4 0 0
Refined metal, ditto....	4	0	0–	5 0 0
Bars, common, ditto....	5	0	0–	—
Ditto, merchant, in Tees	6	10	0–	—
Ditto, railway, in Wales	5	5	0–	—
Ditto, Swed. in London.	11	10	0–12	0 0
To arrive	12	0	0–	—
Pig, No. 1, in Clyde....	2	8	0–	2 18 0
Ditto, f. o. b. in Tees ..		—	–	—
Ditto, forge, f.o.b. in Tees		—	–	—
Staffordshire Forge Pig.	3	10	0–	3 12 6
Welsh Forge Pig		—	–	—

LEAD.				
English Pig	20	0	0–21	0 0
Ditto sheet	21	0	0–	—
Ditto red lead	22	10	0–	—
Ditto white	28	10	0–30	0 0
Ditto patent shot	22	10	0–23	0 0
Spanish	19	10	0–	—

BRASS.	Per. lb.
Sheets	10d.–11d.
Wire	10½d.– —
Tubes	10¾d.–11¾d.

FOREIGN STEEL.	Per Ton.		
Swedish, in kegs (rolled)	—	–	—
„ (hammered).	16	0 0–17	0 0
Ditto, in faggots	17	0 0–	—
English, Spring	18	0 0–23	0 0
Bessemer's, Engineers Tool	44	0 0–	—
„ Spindle	30	0 0–	—
QUICKSILVER	7	0 0	p. bottle

SPELTER.	Per Ton.			
Foreign	17	0	0–17	5 0
To arrive	17	10	0–	—

ZINC.				
In sheets	24	0	0–	—

TIN.				
English, blocks 120	0	0–	—	
Ditto, Bars (in barrels)..121	0	0–	—	
Ditto, Refined 122	0	0–	—	
Banca 120	0	0–121	0 0	
Straits 118	0	0–	—	

TIN-PLATES.*				
IC Charcoal, 1st qua. p. bx.	1	8	0– 1	9 0
IX Ditto 1st quality „	1	14	0– 1	15 0
IC Ditto 2d quality „	1	4	6– 1	6 6
IX Ditto 2d quality „	1	11	0– 1	13 0
IC Coke ..... „	1	2	0– 1	2 6
IX Ditto..... „	1	8	0– 1	8 6
Canada plates ....p. ton	12	10	0–13	0 0

In London; 20s. less at the works.

Yellow Metal Sheathing .... p. lb. 10d.

Indian Charcoal Pigs in London 6 12 6– 6 15 0

* At the works, 1s. to 1s. 6d. per box less.

IN accordance with our usual custom, we now lay before the readers of the *Mining Journal* a Review of the Metal Market for the year now closing. As is generally the case at this period of the year, the business of the week will not need any special reference, being drawn within the narrowest limits, in order to close up the year with as few outstanding accounts as possible.

REMARKS.—The expectations so generally entertained at the expiration of 1860 that the present year would prove to be commercially a most prosperous one have certainly not been realised. Last year closed with extreme dulness both in our home and export trades. The Italian question, then pending, interfered sadly with the Mediterranean demand, and the shipments to India during the two previous years had been so excessive as to completely glut those markets. These, combined with other adverse influences, caused the depression to continue far into this year; in fact, it characterised the first six months, with but few exceptional periods of reaction, and these few only of a slight and temporary character. A variety of causes contributed to the continuance of this dulness in trade. It may be in a great measure attributed to the scarcity of money (the Bank rate of discount ruling very high), also to the absence of the usual export demand, foreign markets having been recklessly overstocked, merchants and manufacturers making shipments and consignments during 1858-9, especially to India and Australia, at a rate which, as the result shows, nearly closed up those markets to profitable trade in metals. This mischievous and by no means regular business was carried on by many manufacturers in order to dispose of the large stocks which, in the absence of *bona fide* demand, had accumulated on their hands. The disastrous effects and ruinous returns show it to have been very short-sighted policy. At this juncture the civil war broke out in America, and created, in conjunction with the then existing evil, a state of things little short of utter stagnation, which continued, as we before stated, up to the end of July. The manner in which this great commercial depression has been survived is certainly most gratifying, as it affords a triumphal proof of the soundness and wealth of the trading community and the country at large; but such proofs are frequently very dearly bought. In exercising too rigid a caution, English merchants may lose opportunities of trading, which foreigners would doubtless benefit by, and the introduction of foreign merchandise in some markets might lead to the permanent exclusion of our own manufactures. Returning from this brief digression, we resume our remarks. Dating from July, the effects of a gradual relaxation in the money market, genial weather, and promising harvest, began to be felt in a beneficial manner; the prices of metals had now reached their minimum, and facilities existing in the money market encouraged speculation. For some time past speculators had been watching narrowly, in order to take advantage of the earliest indications of any favourable turn, the impression being at this time that lower rates were impossible, and that things had now reached their worst, and, consequently, must soon begin to mend. Buyers prepared to operate with caution at first, until more firmness should be visible amongst sellers; the reaction was very gradual, and improvements in prices were with difficulty sustained, being kept up by speculation alone, which is, at the best of times, unstable. In September, the market still progressing, though somewhat spasmodic, and apt to stiffen suddenly and then as suddenly relapse (the invariable consequence of a speculative demand. More firmness and steadiness ensued under a legitimate export demand which sprung up for India, China, the Mediterranean, and France. At the commencement of October further restrictions were, under the Commercial Treaty, removed from trade with the latter country, and shipments thither consequently increased. The tone of our market became decidedly healthy, even America, though only to a limited extent, again sending over orders. Enhanced prices were realised, a good business doing, and up to this time all was going on well, when this unfortunate *Trent* affair hangs the ghastly spectacle of war over our heads, creating alarm, confusion, and the immediate suspension of all business. Less excitement exists now that the novelty of our position with regard to America has somewhat worn off, but a very large proportion of business is kept back until a definite reply to our despatches is received from America, to decide for war or peace. A separate account of each metal, in the usual order, will be found below.

COPPER.—The business transacted during the year in English descriptions has been extensive; but the exceedingly low prices ruling have rendered it anything but a remunerative trade to the smelters, the standard by which they purchased ores having been proportionately much above the price of the manufactured article; as stopping their mills would, however, incur an enormous expense, they have been obliged to work on, and in many cases to take contracts on terms resulting in positive loss to themselves. The fixed price of sheets, sheathing, and bolts was, during January, February, and the greater part of March, 11¼*d.* per lb.; but, as the demand gradually decreased and underselling became the rule, a reduction of ¼*d.* per lb. was submitted to; this price (11*d.*) remained with a fair enquiry up to about the middle of May, when the market became dull, and several second-hand lots were offering under price. On the 24th June a further reduction of ¼*d.* per lb. took place, making quotations 10¼*d.* per lb. for manufactured and 93*l.* for cake and tile; but so little confidence was placed in the stability of the market that difficulty was experienced in realising at even ¼*d.* under this price, a very large quantity being held in second hands. For nearly 10 years previously so low a figure had not been touched. Eventually a better feeling was manifested, and second-hand parcels in the meantime having been cleared off, a good enquiry sprung up. The standard of ores advanced steadily at each successive ticketing; but not until the middle of August was any advance made in fixed rates, and then only ¼*d.* per lb. This, however, had the effect of increasing the demand. A large business was done, and prices were well maintained up to about the middle of October, when a falling off was visible, and much less activity prevailed; just then, very unexpectedly, the smelters announced a further rise of 3*l.* per ton. This was done apparently only to keep pace with the rising standard, as copper was but in limited request at that time. An improvement in the demand for India, and the still advancing price, caused a further rise to 12*d.* on the 25th November, since which parcels in second hands have been offering under price, and our market, owing to the American difficulty, closes in a nominal state. Foreign has mostly followed the course of English. The stocks of Burra Burra in the former part of the year were very heavy, but are now much reduced. The price has varied from 92*l.* to 104*l.* per ton, lowest prices ruling in July and advancing simultaneously with English. From the highest point a slight concession has been submitted to, sales being reported at 103*l.*; at the moment, however, there is no enquiry, and the price consequently is nominal. Kapunda has sold freely, value closely approximating to Burra. Chili has been bought largely, and the stocks much diminished, owing to the supplies this year being considerably under last year's importations. Prices have varied from 82*l.* to 94*l.*; but for the moment buyers decline purchasing. Several parcels of Spanish, of various brands, have arrived and met with ready sale, quotations varying from 82*l.* to 93*l.* Large quantities of Baltimore have been shipped from America to this country and the Continent, which has operated most unfavourably upon this as well as upon the continental markets. Orders lately have been received for the whole quantity remaining in first hands to be returned, and some shipments have already been made. As soon as the markets are wholly relieved of these parcels other descriptions will occupy an improved position. Some importations of Japan copper sheets, wire, &c., have realised a little above old copper prices. Yellow metal has been altered at the same times as copper: but considerable underselling is carried on since so much has been rolled in Birmingham, prices varying at times as much as 1*d.* to 1¼*d.* per lb. under fixed rates, according to quality.

IRON.—The dulness of trade during the year has been felt very severely by the ironmasters, and for the most part their selling prices are stated to be less than the cost of production: this is more particularly the case in railway and merchant bars. For rails the demand has been extremely limited. One of the greatest outlets for this description of iron was America, whose immense lines have helped to keep our manufacturers well employed for several years past, and now the falling off, on account of the prohibitive duty levied, has caused great depression. Prices of rails have undergone but slight fluctuations, only varying from 4*l.* 17*s.* 6*d.* to 5*l.* 5*s.* at the works. The higher rate was barely maintained at any period. The scarcity of railway orders has compelled many of the works to turn their attention to rolling merchant bars, and, though these have been in fair request throughout the year, contracts were taken by makers at exceedingly unremunerative prices, rather than resort to the ruinous alternative of manufacturing for stock or blowing out furnaces. From 6*l.* 10*s.* in January, the price fell to 5*l.* 15*s.* in July and August; since, a slight improvement has been maintained, and 5*l.* 17*s.* 6*d.* to 6*l.* is now quoted, f.o.b. in London. North of England bars can be bought in quantities at 5*l.* 15*s.* Staffordshire makers have been obliged during several months to work short time, and at the half-yearly meeting a fixed reduction of 10*s.* per ton in price was agreed upon. This produced little or no improvement in the demand, which continued without change up till the last week or so, when a rather better enquiry has been manifested. Swede bars in the early part of the year were tolerably active at 11*l.* 5*s.* to 11*l.* 10*s.*, but decreased in value some 12 or 13 per cent. about July. The stocks during the whole year have been decreasing, and the arrivals by no means excessive; but the market has been so sluggish that even 10*l.* per ton could not at one time be obtained. There is now less offering, and higher rates are anticipated; stocks in London very low. Scotch pigs, in proportion with the price of manufactured iron, have ruled high. The vast amount of speculation in the pig-iron market frequently places the article in a false position and causes rapid fluctuations, which are exceedingly vexatious, and often attended with much loss to the genuine consumer. In January mixed numbers were quoted at 49*s.*; March, 47*s.* 6*d.*; August, 51*s.* 9*d.*, declining again to 48*s.* 3*d.*, on account of the American affair. The last day or two there is a slight recovery, sellers quoting 48*s.* 7½*d.* to 48*s.* 9*d.* cash, mixed numbers.

LEAD.—During the year this metal has thoroughly carried out its material characteristic of heaviness, and prices have reached a lower point than for the last 10 years. Early in this year the exports of English pig, especially to China, were large, and prices maintained with firmness at 21*l.* 5*s.* This demand falling off caused the market to decline, without any reaction whatever right up to September (lowest point 18*l.* 15*s.*), when the demand began to improve, and sellers held for higher rates. A comparatively large business was about this time transacted, and has continued until lately very satisfactory; 20*l.* is now quoted. Sheet, shot, and other descriptions have been but slightly in request all through the year. The imports of Spanish pig have been large, and prices ruling in proportion to English. German, of soft quality and known brands, disposed of freely at 18*l.* 10*s.* to 19*l.* The demand in Germany for direct shipments to America, however, maintain prices beyond present quotations of English.

SPELTER.—The spelter market is always a favourite medium for speculation, and the various alterations in price are, therefore, not much guide to the actual genuine demand. Prices during this year have been no exception to the general rule, but they have reached a lower minimum than since 1852—viz., 16*l.* In 1857 the quotation advanced to 30*l.* 17*s.* 6*d.*, or very nearly double. Large quantities have at different periods changed hands; these sales, however, have been entirely on speculation—deferred prompts, distant arrivals, &c., being used to create a species of time bargaining. So unsound is this kind of trade that frequently higher rates ruled on the other side than here, the market being artificially elevated or depressed. Another proof of inconsistency; the stocks here were larger in January (over 5000 tons), when the price was 19*l.*, and they actually diminished for several months while quotations were at the same time falling; for the last three months the price has increased and stocks also. The American news has depreciated the value of spelter 30*s.* or 40*s.* per ton, equal to 10 per cent. The present stocks held in London amounts to upwards of 5000 tons, and is still increasing. Zinc is in the hands of only a few manufacturers, who consequently enjoy almost a monopoly, and are generally able to sell at their own prices.

TIN.—For more than two years past this metal has been on the decline, until the last three or four months, when a decided reaction set in, and prices once more assumed an upward tendency, which, however, at the present unfortunate juncture shared the fate of all other metals, and was checked by the probability of an interruption of our amicable relations with America. Quotations for English declined in the first part of the year, January to August, from 132*l.* to 114*l.*, at which price they began to improve, with an increased demand, and so continued. In foreign the deliveries of Banca have been very large, and the supplies for the ensuing year are expected to be rather short of 1861. Prices have varied about 16*l.* per ton. In Straits arrivals are much larger this year than hitherto, and, judging from stocks, the market is not very promising. It is, however, chiefly held in strong hands, and therefore is not likely to be sacrificed. Last business reported 118*l.*

TIN-PLATES have, with very little variation, worn a declining appearance. One or two slight attempts have been made to increase quotations. For a short time sellers have been enabled to show an appearance of firmness; but only temporary benefits were experienced, the demand invariably falling off again, these advances only serving to mislead purchasers. In January 24*s.* was quoted for IC coke; April, 23*s.*; May, 23*s.* 6*d.*; August, 21*s.* 6*d.*; December, 22*s.* Makers being better supplied with orders, should America continue to maintain peace with England, large shipments will probably be made next spring.

STEEL.—The demand for English descriptions has been of a limited character. In Swedish keg, the most important item classed under the head of foreign steel, excessive stagnation marked the trade for the first nine months of the year, and the price has fallen considerably below the average of the last 10 years. A better feeling has since been manifested, and some large sales for arrival have taken place. The large stocks accumulated in India by excessive shipments to those markets are now decreasing, and a good Indian demand may be looked for next spring.

QUICKSILVER.—The sale of this article now being monopolised by the Spanish Government, a uniform rate of 7*l.* per bottle of 75 lbs. has been maintained throughout the year.

Since our last, although there have been, through the funeral of the lamented Prince Consort, and the Christmas holidays, several interruptions to business, the MINING SHARE MARKET has undergone a change for the better, and indicates that great activity may arise should the message from across the sea be such as to justify the hope for peace. Even as it is, an improved demand exists for shares, and we shall not be far wrong in predicting a good advance in prices, and a greatly extended demand for shares early in the coming year; and that this is the general feeling may be gathered from the fact that the dealers are offering higher prices for the January account than the shares can be purchased at for cash. The year that is now passing away from us so quickly has not been one of great success to the miner or to the speculator. There have been one or two very bright stars, it is true, but general results have not been propitious, though we believe that many promised successes require only a little more time for development: may it prove so, and may the year that is coming prove one of general success to "One and All." East Caradon shares advanced to 29¼, and leave off 28¾, 29, and a large business done. On Monday a report was received that a new lode, worth 20*l.* to 30*l.* per fm., had been cut in the south cross-cut at the 60; and notwithstanding that the day was a partial cessation from business, and very few dealers in town, the shares rose 1*l.* each. The latest report states the 50 east to be worth 80*l.* per fm.; the 60 east, 50*l.* per fm.; the new lode, 30*l.* per fm., and considered an important addition to the value of the mine. This time last year the shares were about 11*l.*, and from the time we first directed public attention to the mine (shares were then at 2*l.*) to the present, we have constantly kept its great merits before our readers; and in this season for retrospection, therefore, it is very gratifying to find how fully all we have said has been borne out. In little more than two years the mine has risen from a market value of 12,000*l.* to 180,000*l.*, and is yet in its infancy. South Frances shares have been in good demand, and leave off 112¾ to 117¼. Wheal Grenville shares are also in demand, and a large business done at 35*s.*, 37*s.* 6*d.*; the 100 west has improved to 1 ton of rich yellow ore per fm., and this part of the mine now holds out great prospects, and the 80 cross-cut daily expecting to reach the lode. Wheal Clifford, 30 to 31; at the meeting, on the 18th, the accounts for the old adventurers showed 1083*l.* 5*s.* 1*d.* to divide, and a dividend of 2*l.* 3*s.* 4*d.* per share was declared. In the amalgamated accounts there was a loss of 1135*l.* 13*s.* 2*d.*; it was explained, however, that this arose from two months' costs having been charged against one month's ore, and the bills have been heavy to get all the machinery in a proper state of working; but at the next account this debt will be wiped off, and a profit made of 2000*l.* to 2500*l.* besides. The United Mines are described as poor, but with fair prospects, while Clifford looks well. The 220, east of Garland's shaft, is worth 10 tons of copper ore per fm.; the 200, 15 tons per fm. West Basset, 13¾ to 14¼; the mine has improved at the 50; at Grenville shaft the lode is worth nearly 2 tons per fathom. Alfred Consols, 10*s.* to 12*s.* 6*d.*; Bottle Hill, 12*s.* 6*d.* to 13*s.* 6*d.*; Bryn Gwiog, 26½ to 27½; Condurrow, 62½ to 67½; Cook's Kitchen, 29 to 30; East Basset, 52 to 54. East Carn Brea shares have been firm, and largely dealt in, leaving off 9¾ to 10; the mine has sampled 345 tons of ore. East Russell, 3 to 3½; East Wheal Grenville, 32*s.* 6*d.* to 35*s.*; East Budnick and Mount, 5*s.* 6*d.* to 6*s.* 6*d.*; Grambler and St. Aubyn, 18 to 19; Great Retallack, 12*s.* to 14*s.*; Great Wheal Fortune, 12 to 13; Herodsfoot, 37 to 39; Hingston Down, 3½ to 3¾; Lady Bertha, 13*s.* to 14*s.*; Marke Valley, 9¾ to 10; Merllyn, ½ to ¾; North Basset, 2¾ to 3 North Robert, 18*s.* to 20*s.*; North Roskear, 18 to 20, and more in demand; the mine has improved in the 184 west, worth 20*l.* per fathom for copper.

North Treskerby, 18 to 20; Par Consols, 7½ to 7¾. Prosper United have advanced to 44*s.*, 46*s.*, and in good demand. Providence Mines, 39 to 41; Redmoor, 4*s.* 6*d.* to 5*s.* 6*d.*; Rosewall Hill and Ransom United, 45*s.* to 50*s.*; Rosewarne United, 18*s.* to 20*s.*; Sortridge Consols, 11*s.* 6*d.* to 12*s.* 6*d.*; South Caradon shares have declined to 315, 325; South Tolgus, 46 to 48; St. Ives Consols, 27 to 29; Stray Park, 30 to 31; Tincroft, 7¾ to 8; Treloweth, 25*s.* to 27*s.* 6*d.*; Wendron Consols, 10½ to 11; West Caradon, 47 to 49; West Seton, 290 to 295; Wheal Arthur, 12*s.* to 14*s.*; Wheal Basset, 84 to 86; Wheal Crebor, 9*s.* to 10*s.*; Wheal Grylls, 13¾ to 14½; Wheal Agar, 2¾ to 3; Wheal Margaret, 39 to 41; Wheal Mary Ann, 16½ to 16¾. Wheal Seton shares have not been so firm, and leave off 120 to 122½. Wheal Trelawny, 16 to 17. Wheal Uny shares have been in considerable request, at 4¾ to 5½; Wheal Union, 1¾ to 2½; Great South Tolgus, 3¾ to 4½; Tamar Consols, 1 to 1¼. Devon Great Consols, 360 to 370; the 115 east is worth 5 tons per fm., and a great improvement anticipated. In the 103 the lode is worth 5 tons per fm. In the new ground the lode in the deep adit west is 4 ft. wide, composed of mundic, capel, and quartz. West Rose Down, 9 to 9½; in three or four weeks the engine-shaft will be down to the adit level, by which time the engine will be ready to go to work. Long Rake, 13½ to 14½.

On the Stock Exchange, during the week, a moderate amount of business has been transacted in Mining Shares. The following prices were officially recorded in British Mining Shares:—East Basset, 54, 52½; East Caradon, 28¾, 29, 29½, 29½, 29¾; South Wheal Frances, 110; West Caradon, 48; Clifford, 30; East Carn Brea, 10, 9½; East Wheal Russell, 3; Wheal Mary Ann, 16. In Colonial Mining Shares the prices were:—Bon Accord, ½, ¾; Dun Mountain, 1½; Great Northern Copper of South Australia, 1½, 1¾, 1½; Scottish Australian, 1¾, 1½, 1½. In Foreign Mining Shares the prices were:—Mariquita, ½; St. John del Rey, 49¾, 50, 49½, 48¾; United Mexican, 8¾, 8½, 8½, 8¾.

The closing quotations for shares in new undertakings were:—Ocean Marine Insurance, 5½, 5¾ prem.; Thames and Mersey Marine, 1½, 1¾ prem.; Universal Marine Insurance, 1⅛, 1¼ dis.; London and Provincial Marine, ½, ¾ dis.; Mercantile Fire, 7-16 to 9-16 prem.; Commercial Union Fire, ½, ¾ dis.; Indian Carrying Company, par to ¼ prem.; Santa Barbara, ¼ prem. Transactions have also taken place in Llanmorlais Colliery Company, Cardiganshire Consolidated, St. Just United, and Amman (Aberdare) Colliery Company.

Preliminary arrangements have been agreed upon for the amalgamation of the "Metropolitan and Provincial" and "Mercantile" Banks, recently formed under the Limited Liability Act. By this arrangement the necessary amount of capital has, it is stated, been secured. The new board will consist of an equal number of directors of each company, and it is intended to appoint a manager forthwith, and commence business at an early date.

MINING EXCHANGE SHARE LIST.—The following is forwarded to us officially from the Mining Exchange as business done during the week:—

SATURDAY, DEC. 21.—North Roskear, 20; Wheal Seton, 125; Rosewall Hill, 2¼, 5-16ths; Wheal Grylls, 13¾; Wheal Union, 2; Wheal Edward, 49*s.*

MONDAY.—The Exchange was closed this day, in consequence of the funeral of His Royal Highness the Prince Consort.

THURSDAY.—East Carn Brea, 9⅞; East Caradon, 28 15-16ths, 29¼, ¼; Wheal Uny, 4½, 4*l.* 13*s.*; Stray Park, 30½; West Caradon, 48; Rosewall Hill, 2 5-16ths; Lady Bertha, 13*s.*; Unity, 14*s.* 6*d.*; North Minera, 19*s.*; Grylls, 14; North Roskear, 21, ¼.

FRIDAY.—Grylls, 14; Uny, 4 11-16ths, ¾, ⅞; North Minera, 19*s.*; Sortridge, 12*s.*; Arthur, 13*s.*; West Caradon, 47; Rosewall Hill, 2¼; East Carn Brea, 9 13-16ths, 10; Edward, 2¼.

THE IRISH MINE SHARE MARKET.—Although this has been a broken week for business, transactions in mine shares were very animated. Wicklow Copper and Mining Company of Ireland shares were largely dealt in; the former, however, leaving off at 54, or a decline of about 10*s.* per share, sellers, while the latter experienced a rise of nearly ¾, and are enquired for at 15¾. General Mining Company for Ireland shares were in request at 5¾, but are now readily obtained at a slight reduction. Carysfort shares have not been dealt in, but Connarree shares have fluctuated between 30*s.* 6*d.*, 31*s.*, 31*s.* 6*d.*, and remains on sale at 32*s.*

COAL MARKET.—On Friday, the market opened for the first time this week, 122 ships having arrived in the interval. House coals were in better request, at an advance of 3*d.* per ton from the quotations of this day week. Hartley's were in fair supply, but a large demand having sprung up for export, prices rose 1*s.* per ton. In manufacturers' there is no change to notice. Hetton Wallsend, 18*s.*; South Hetton Wallsend, 18*s.*; Lambton Wallsend, 17*s.* 3*d.*; Braddyll's Wallsend, 16*s.* 9*d.*; Hasting's Hartley, 16*s.*; Tanfield, 13*s.* per ton: 41 cargoes unsold; 30 ships at sea.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Laird, we learn that the quantities of Coal exported during Nov. was 484,782 tons, against 529,841 tons in the corresponding month of 1860, showing a decrease of 45,059 tons. The particulars are—From the Northern ports, 225,333 tons; Yorkshire, 18,183 tons; Liverpool, 46,655 tons; Severn ports, 152,853 tons; and Scotch, 41,758 tons. The total exports from Jan. to Nov. were 6,783,584 tons, against 6,388,354 tons in the same period of 1860, being an increase of 395,230 tons during the present year. There was a decrease in the month's shipments at the Northern ports of 33,452 tons; Yorkshire, 10,617 tons; Severn, 16,176 tons; and the Scotch, 2954 tons: while there was an increase at Liverpool of 18,140 tons.

The shipments of coal to North America during last month from the various ports in the kingdom amounted to 17,909 tons, being an increase of 2503 tons over the corresponding month of last year. The shipments were—from the Northern ports, 2093 tons; Yorkshire, 486 tons; Liverpool, 10,299 tons; Severn ports, 1638 tons; and Scotch ports, 3393 tons.

One thousand pounds is about to be voted by the Tasmanian Legislature, for the purpose of testing the quality of Tasmanian coal, and Lieut. Brooker, the Admiralty surveyor, is about to report on the practicability of establishing ports for the shipment of coal on the eastern seaboard of Tasmania.

We believe it to be a universally-acknowledged fact that well-collated statistics afford invaluable information, and should, after most careful revision, be published and circulated as extensively as possible. From them not only is the true status of every interest to be judged, and a correct idea of their worth formed, but they give data by which to guide the judgment for the future conduct of affairs, whether national or personal. What would be thought of a minister, as financier, who did not make the greatest efforts to obtain, and found his acts upon, authentic statistics? The same rule applies to every-day life, even to the regular periodical balancing of a tradesman's accounts. In no branch of business is this regularity, in sources of information, more necessary or desirable than in mining.

Strange to say that, notwithstanding these premises be on all hands admitted, still there exists the greatest difficulty in obtaining so correct, full, and explicit particulars of the actual produce, value, and locality of our mineral returns as by a little trouble and attention by those most interested and concerned therein could be every year laid before the public. That indefatigable collector, Mr. ROBERT HUNT, to whom the country at large is so much indebted for his extensive compilations and lucid classifications, notwithstanding his position as Keeper of the Mining Records, experiences the greatest difficulty in procuring *correct returns*, more particularly of tin and zinc ores. These we know are frequently sold in such small parcels by the producers as to be thought by them unworthy the trouble of recording; but they should remember the Scotch adage—"Many mickles make a muckle." Again, many mines at a distance from samplers' rounds, send small parcels of copper ores direct to the smelters; and although these may, and probably do, enter into the gross returns, as supplied by the smelters, yet the mines from which they are derived are not specified, and thus the most valuable information is lost. In other cases, and we rejoice to say they are rare, a most reprehensible desire for secrecy exists amongst managers and committees, and we have been sometimes blamed for publishing particulars of the produce of mines, that could by no possibility mar or interfere with their interest. Such narrow-minded-

ness we heed not, and hope all such will in future acknowledge the value of the information they afford others as well as what they receive.

As the time for publishing the quarterly and annual returns is now rapidly approaching, we earnestly invite all producers to send us all the particulars they can of their various productions, however insignificant they may consider them, for insertion. After almost every publication of quarterly returns we receive letters of complaint from shareholders, enquiring why their mines having sold ores have been omitted, or why the returns, if inserted, have been incorrectly rendered? Our desire is to render a list implicitly correct. It must be obvious, however, that unless we have the concurrence and encouragement of our friends from the mining districts our efforts must be in vain for the accomplishment of so desirable an end. We shall, undoubtedly, approximate to this fact, but that is not the point. We want to feel and know that we are right; and, therefore, cordially invite for ourselves and our friends such information as we have referred to.

If intelligent mining captains and secretaries resident in the neighbourhood of small or secluded stream works, halvaners, and buyers of job lots of blende, mundic, and copper ores, would take upon themselves the trouble of obtaining from parties such particulars as desired, and which they would undoubtedly most willingly give, they would do the mining interest no small service, as well as confer a favour on all well-thinking individuals; as far greater quantities are yielded by these sources than at first sight would appear, or would readily be conceived. We promise to give every communication our best attention; and now commend these exhortations to the notice of our numerous patrons and correspondents.

At Redruth Ticketing, on Thursday, 3001 tons of ore were sold, realising 14,413*l.* 7*s.* The particulars of the sale were—Average standard 132*l.* 7*s.*; average produce, 5¾; average price per ton, 4*l.* 16*s.*; quantity of fine copper, 171 tons 5 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Nov. 28	4148	£138 15 0	5⅞	£5 7 6	£91 11 6
Dec. 5	4679	136 2 0	6¼	5 14 0	91 17 0
„ 12	3073	132 12 0	6½	5 9 6	88 7 0
„ 19	6039	135 12 0	5⅝	4 11 6	86 15 0
„ 26	3001	132 7 0	5¾	4 16 0	84 3 0

Compared with the sale of last week, the decline has been in the standard 1*l.* 10*s.*, and in the price per ton of ore about 2*s.* Compared with the corresponding sale of last month, the decline has been in the standard 6*l.*, and in the price per ton of ore about 8*s.*

At the Swansea Ticketing, on Tuesday, 1119 tons of ore were sold, realising 16,490*l.* 0*s.* 0*d.* The particulars of the sale were—Average standard, 100*l.* 8*s.* 6*d.*; average produce, 15½; price per ton, 14*l.* 14*s.* 6*d.*; quantity of fine copper, 173 tons 9 cwts. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore cop.
Nov. 26	1380	£119 17 0	11 9-16	£11 12 6	£100 10 0
Dec. 10	1450	117 4 0	11 9-16	11 5 6	97 10 6
24	1119	109 8 6	15½	14 14 6	95 1 6

Compared with last sale the decline has been—in the standard, 2*l.* 10*s.*; and in the price per ton of ore about 7*s.* 9*d.* Compared with the corresponding sale of last month the decline has been—in the standard 5*l.* 5*s.*, and in the price per ton of ore about 16*s.* 3*d.* Of the 1119 tons of copper ore sold on Tuesday, 340 tons were from British mines, which gave an average produce of 10½, and sold at an average standard of 113*l.* 14*s.* 6*d.*=9*l.* 15*s.* per ton of ore. The remaining 779 tons were foreign ores, which gave an average produce of 17¾, and sold at an average standard of 107*l.* 14*s.*=16*l.* 18*s.* per ton of ore. On Jan. 7 there will be offered for sale 1585 tons of ore from Cobre, Wheal Maria, Ookip, Holyford, Spain, &c.

The following dividends have been declared during December:—

West Wheal Seton	£8	0	0	£3,200	0 0
Dolcoath	8	0	0	2,864	0 0
Great South Tolgus	0	5	0	1,500	0 0
North Downs	0	5	0	1,500	0 0
Tincroft	0	5	0	1,500	0 0
Wheal Basset	2	0	0	1,024	0 0
Mount Pleasant	1	5	0	800	0 0
Bedford United	0	3	0	600	0 0
Wheal Seton	1	10	0	594	0 0
Wheal Mary Ann	0	10	0	512	0 0
Orsedd	0	1	3	320	0 0
Roscean	1	5	6	300	0 0
St. John del Rey	3	0	0	33,000	0 0
Total				£47,714	0 0

At Hingston Down Consols meeting, on Tuesday (Mr. W. A. Thomas in the chair), the accounts for the two months ending October showed—Balance last audit, 76*l.* 19*s.* 1*d.*; ores sold, 1158*l.* 17*s.* 7*d.*; calls received, 260*l.* 1*s.* 6*d.*; carriage, 128*l.* 9*s.* 11*d.*=1624*l.* 8*s.* 1*d.*—Mine cost, merchants' bills, and sundries, 1526*l.* 19*s.* 7*d.*: leaving credit balance, 97*l.* 8*s.* 6*d.* Captain T. Richards reported that the sampling on December 31 will be about 360 tons of fair quality ore, and, on the whole, he considers their present prospect very encouraging. The cost for the ensuing two months, including the new and Bailey's engine-shafts, will be about 1600*l.*

At the Great Wheal Busy United meeting, on Monday (Mr. Pinnington in the chair), the accounts showed a debit balance of 266*l.* Details in another column.

At the Gernick Mine meeting, yesterday (Mr. Lankshear in the chair), the accounts for the four months ending October showed a debit balance of 88*l.* 6*s.* 7*d.* A call of 1*s.* per share was made. The report stated that the granite had been reached in the 30 east, and the lode was large but unsettled, in consequence of the change in the formation from killas to granite. The lode in the shaft was disordered, in consequence of an elvan course, but it was thought from the appearance of the lode and ground that the shaft had nearly reached the granite. It was considered desirable that the shaft should be sunk into the granite to see the effect of the change of formation upon the lode. The 30 east was looking better. The committee was re-elected, and proceedings were ordered to be taken against defaulters.

At Carnyorth Mine meeting, on Dec. 16, the accounts for July, Aug., and Sept. showed—Mine cost, 1424*l.* 15*s.* 9*d.*; merchants' bills, 232*l.* 1*s.* 5*d.*; coal, 126*l.* 11*s.* 9*d.*; lords' dues, 64*l.* 0*s.* 5*d.*=1847*l.* 9*s.* 4*d.*—Received for tin, 1536*l.* 11*s.* 7*d.*; sundries, 7*l.* 10*s.*—making loss on the quarter's working, 303*l.* 7*s.* 9*d.*, which added to debit at last audit, leaves 1271*l.* 8*s.* 2*d.* now against adventurers. A call of 5*s.* per share was made. Capts. J. Carthew, W. Trembath, and J. Wallis reported on the mine.

At the Crookhaven Mine annual meeting, on Monday (Col. Bush in the chair), the accounts made up to November showed a balance in favour of assets of 942*l.* The uncalled capital amounted to 9831*l.* Details in another column.

At the East India Coal Company (special) meeting, yesterday (Mr. H. Haymen in the chair), the resolutions passed at the last special meeting were unanimously confirmed. They were to the effect that the maximum number of directors should not exceed twelve, of which five are to be resident in India. Dr. Macrae, Mr. Lyall, and Mr. D. C. Mackey were elected the directors in India, with power to elect two others. Details in another column.

At Carysfort Mining Company meeting, to be held on Jan. 6, the accounts for the half-year ending October will show—Balance last audit, 653*l.* 5*s.* 8*d.*; loans, since repaid, calls received, and sundries, 1076*l.* 5*s.* 1*d.*=1729*l.* 10*s.* 9*d.*—Mine cost, merchants' bills, and sundries, 1173*l.* 16*s.*: leaving credit balance, 555*l.* 14*s.* 9*d.* The directors report that the works which were being carried on at the period of the last half-yearly meeting resulted in the discovery of a lode of some promise on the townland of Ballintemple. The proving of this lode, the development of the lead mine on the same townland, the continuation of the adit level at Ballysilliogue, and the working of the Hope, or south lode, at the copper mine of Moneyteigue, are the operations which have occupied the greater portion of the last six months. At Ballintemple Lead Mine a most important work—the making of a water course to the river—has been completed. A never-failing supply of water to the wheel is now assured, and the sinking of the shaft has accordingly been resumed. The driving of the adit level at Ballysilliogue has been somewhat retarded owing to a run having taken place; this is now secured, and prior to the next half-yearly meeting it is expected that the sulphur lodes seen at the surface will be intersected. The removal of the engine from the north to the south lode at Moneyteigue has been most satisfactorily effected; all the preparatory work has been completed, and good progress should now be looked for. The appearance of this lode has improved, very good stones of copper are now being broken in the shaft. All the shafts, levels, and machinery are in perfect working order. Capt. W. G. Roberts reports upon the various points of operation in the mines.

AUSTRALIAN GOLD.—When the last mail left Australia, the Great Exhibition of specimens of the productions and manufactures of Victoria had been opened at Melbourne. In order to give an idea of the quantity of gold which had been extracted from the colony, and which amounted at that time to upwards of 26,000,000 ounces, or 1492 cubic feet, a pyramid of light metal, with gilt facing, was about to be put in the exhibition. The base is 9 ft. square, and 2⅛ ft. high, and from this will spring a pyramid 48 ft. in height. The above-mentioned quantity of gold would form a solid pyramid of such dimensions.

THE CHESTERFIELD AND MIDLAND SILKSTONE COLLIERY COMPANY.—The shares have been allotted, and the directors have taken steps to immediately prosecute the works, the company's manager (Mr. Wright) being about to proceed to the property to make the necessary arrangements for erecting the machinery, &c.

THE MERSEY DOCK BOARD AND THE COAL TRADE.—At the meeting of the Mersey Docks and Harbour Board yesterday (Thursday) the following recommendation from the works committee, with regard to increased facilities for the coal trade at Birkenhead, was laid before the board:—To fix the charge for the use of the coal tips at Birkenhead at 2d. per ton; the us of the low level to be free; a charge of one half-penny per ton to be made for weighing at either place. The following recommendations were also presented by the works committee:—To purchase two second-hand locomotive engines for pumping at the Birkenhead works, at a cost of about 500*l.* each; to lay down an additional line of rails at the coal-yard occupied by Messrs. Battersby and Co., at Birkenhead, they paying 7½ per cent. upon the outlay. After some discussion the recommendations were confirmed.

THE METROPOLITAN RAILWAY LOCOMOTIVE.—The original design for the locomotive to be used on the Metropolitan Subterranean Railway emanates from Mr. Edmund Edwards, of Beaufort-buildings, the original drawings having been prepared by him, and merely trifling modifications in details having since been made. The steam is so perfectly condensed that the locomotive can be run five miles without blowing off, and as the longest tunnel on the Metropolitan line is two miles the machine cannot fail to prove effective. Although there is a mixed gauge laid the engines will at present be exclusively broad gauge, and as the line is to be worked by the Great Western Company are likely to continue so.

A further series of trials has been made in Chatham Dockyard for the purpose of testing specimens of plate and angle-iron from the Consett and Derwent Ironworks, proposed to be used in the construction of the iron frigate *Achilles*, building at Chatham. The result of the trials of the angle-iron was deemed satisfactory, nearly the whole of the specimens subjected to the hydraulic tests standing the strain of 22 tons to the square inch, with the grain, without signs of fracture. In the second series of trials with some additional specimens of iron, consisting principally of plate iron, the result of the several tests was not deemed so satisfactory by the dockyard officials, under whose superintendence they were made. A quantity of the largest kind of chain cable, constructed of the best iron at the establishment of Brown and Lennox, Cardiff, intended for the iron frigate *Defence*, and the other vessels fitting for commission at Chatham, was also subjected to a variety of tests to ascertain its strength and quality with very satisfactory results.—*Times*.

THE HYDRO-PNEUMATIC MOTOR.—Some months since we referred to the invention, by Mr. C. Boutet, of an improved means of producing motive power applicable to every branch of industry, and from the report in the *Independance Belge*, of some experiments which have been made at Brussels, it appears that a machine, upon a full working scale, has been in actual operation. The experimental machine, says our authority, is of 6-horse power, and we have seen it at work; the result of the experiments being so satisfactory, that one of the principal Liége firms has arranged with the inventor to develope his discovery; the first condition being that they shall manufacture an engine of 20-horse power, and with double action; and the next important one, that the manufacturers shall have half the profits realised. Arrangements are also pending for carrying out the invention in other parts of Belgium, and we trust the inventor will meet with that reward which his ingenuity so justly entitles him to.

THE MINERS OF FOWEY CONSOLS.—At the monthly setting at Fowey Consols Mines, on Saturday last, a complaint was made of the manner in which a great portion of the miners regarded the Sabbath. Mr. Treffry gave them a good lecture, and informed them that at the next setting-day he should expect every man to declare himself to what denomination he belongs, which will be inserted in a book, and their attendance at their different places of worship enforced, if they intend working there; and that the same rule will be carried out in the other mines where he is interested. He hoped there were no infidels present; if so, they had better part at once.

THE ANNUAL REVIEW OF MINING.

BY J. Y. WATSON, ESQ., F.G.S.

We have given but a very limited portion of the Review in this week's Journal; and as, from its length and importance, we have found it impossible to devote the space required for its appearance in the Journal entire, in one or even two papers, we have determined that the whole shall be printed, in the usual pamphlet form, to be published as early as possible, price 1*s.*; the Review thus forming a Supplement to the Journal.

*** With next week's MINING JOURNAL we shall print, in a SUPPLEMENTAL SHEET, the TITLE-PAGE and INDEX to our 31st Volume.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL, notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 30th inst., to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY— COPPER SHEETS.

And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 30th day of December, 1861, after which hour no tender will be received. GERALD C. TALBOT, Director-General.

India Office, December 19, 1861.

TO IRONFOUNDERS AND OTHERS.—REQUIRED, TENDERS for CAST IRON PIPES, BENDS, BRANCHES, SYPHONS, &c., for the Adelaide Gas Company, South Australia. Specifications to be seen at the office of Messrs. Filby and Co., 63, Fenchurch-street, London, E.C., between the hours of Twelve and Two. All communications by letter to be addressed to the company's agent, Mr. J. LANTON, jun., to care of Messrs. Filby and Co. Tenders must be received on or before the 10th day of January next.

WANTED, a good SECOND-HAND BOILER, about 10 tons weight, with the necessary fittings.—Particulars and lowest price to be forwarded on or before Wednesday, 1st of January, to Mr. T. W. ROBINSON, No. 1, Clifton-terrace, Hayle.

WANTED, TWENTY FATHOMS of 9 inch PUMPS. Apply to GEORGE RICKARD, Wenford, Bodmin.

ABOUT THREE HUNDRED AND TWENTY YARDS of ROUND WIRE ROPE FOR SALE, 1¼ in. diameter, in two lengths of about 260 yards each. Almost as good as new, having been worked only two months.—Apply to NASH and HENDERSON, Parkend, near Lydney, Gloucestershire.

STEAM ENGINE FOR SALE.—A 36 in. cylinder STEAM ENGINE FOR SALE, equal to new, with 10 ton BOILER, to be seen at Wheal Trevelyan Mine, Goldsithney, near Marazion.—For further particulars, apply to Mr. E. KING, 27, Austinfriars, London.

IMPORTANT TO CANAL OWNERS.—The MOST ECONOMICAL PROPELLER for CANALS, admitting of the smallest possible draught, and leaving the back-water undisturbed (vide *Mining Journal*, Dec. 14, p. 833), is offered to canal owners on most liberal terms. It can be seen in action, and information received, by addressing "C. G. G.," 2, Gordon-cottages, Holland-road, Brixton.

WILLOW BANK MINING COMPANY (LIMITED).—TENDERS for the PURCHASE of this MINE, with the LEASES, PLANT, and MACHINERY, will be received by the liquidator, Mr. R. B. Mann, at the offices of Mr. J. H. Murchison, 117, Bishopsgate-street Within, London, where also an inventory of the articles and the leases may be examined. R. B. MANN, Liquidator.

CASTLEWARD UNITED MINING COMPANY (LIMITED).—The ORDINARY GENERAL HALF-YEARLY MEETING of this company will be HELD at the office, 33, Upper Sackville-street, Dublin, on MONDAY, the 6th day of January next, at the hour of One o'clock P.M., for the purpose of receiving the directors' report and the abstract of accounts for the half-year ending the 1st of November last, and for the election of two directors. By order,

33, Upper Sackville-street, Dublin, Dec. 21, 1861. A. L. COUSINS, Sec.

DEVON NEW COPPER MINING COMPANY (LIMITED).—Notice is hereby given, that an ORDINARY GENERAL MEETING of shareholders for this year will be HELD on TUESDAY, the 31st inst., at the office of the company. The chair will be taken at Two o'clock in the afternoon precisely. The said meeting will be held, not only for the ordinary business of the company to be transacted at a general meeting, but to consider as to the best mode of raising further capital for the purpose of carrying on the undertaking, and to pass such resolutions as may be necessary for that purpose. GEORGE PAGE, Sec.

16, Barge-yard Chambers, Bucklersbury, London, E.C., December 27, 1861.

PORT PHILLIP AND COLONIAL GOLD MINING COMPANY (Incorporated by Royal Charter).—Notice is hereby given, that the ORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the London Tavern, Bishopsgate-street, London, on WEDNESDAY, the 8th day of January, 1862, at Two o'clock precisely, in pursuance of the Deed of Settlement. By order, CHARLES H. FIELDER, Sec.

Offices, 35, Bucklersbury, Cheapside, E.C., December 27, 1861.

N.B.—The transfer books will be closed on Wednesday, the 1st of January, and open on Wednesday, the 15th of January next.

SAFETY FUSE.—Messrs. WILLIAM BRUNTON AND CO., PENHALLICK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brymbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED to EXECUTE UNLIMITED ORDERS for SUPPLYING FUSE upon warrant that it will prove equal to, if not better than, any to be procured elsewhere.

GOLDENHILL, COBALT, NICKEL, COLOUR, BORAX, AND CHEMICAL WORKS,
NEAR STOKE-UPON-TRENT, STAFFORDSHIRE.
JOHN HENSHALL WILLIAMSON, MANUFACTURER AND REFINER.
Reference.—Professor Miller, King's College, London.

GOLD GETTING MACHINES, for Nova Scotia. Also, the NEW PATENT HYDRAULIC PRESS, important to shippers, packers, and seed crushers, weighing only a few hundredweights instead of tons. Can be seen at the patentee's, J. WALKER, 17, Cowper-street, City-road.

GAS AGAIN.—Another fearful fire, at No. 5, Richard-street, Limehouse-fields, caused by an escape of gas. This could not have occurred had one of HUGHES'S PATENT SAFETY ATLAS INDICATING CHANDELIERS been used. All persons having gas fitted should, therefore, have the IMPROVED ATLAS CHANDELIERS FIXED. Kept in stock by all gas-fitters. Drawings free by post, and a large stock always ready for the trade and merchants at the Atlas Works, No. 76, Hatton-garden. R. H. HUGHES.

LEAD ORES.

Sold on the 26th December.

Mines.	Tons.	Price per ton.	Purchasers.
Westminster	55	£11 15 6	Newton, Keates, & Co.
Maesysaafn	50	12 0 0	A. Eyton.
Mount Pleasant	50	12 6 6	Walker, Parker, & Co.
ditto	5	13 12 6	A Eyton.
Hendre Ucha	15	12 4 6	Walker, Parker, & Co.
Llangynog United	19	12 0 6	Newton, Keates, & Co.

Sold on the 27th December.

ara United	20	11 15 0	Sims, Willyams, & Co.

BLACK TIN.

Sold on the 14th December.

Mines.	Tons c. q. lbs.	Price per ton.	Amount.	Purchasers.
Wheal Kitty	4 8 1 22	£64 10 0	£ 285 4	9—Treriffe.
ditto	4 18 0 20	63 15 0	312 18 10	—Trethellan.
Penhalls	2 13 1 23	68 7 6	182 15	0—Trethellan.
ditto	2 13 0 0	68 10 0	181 10	6—Treriffe.
Gt. Wh. Vor	21 16 3 4	—	1612 5	0— —

Sold on the 16th December.

Gt. Wh. Fortune	22 18 3 2	—	1726 10	6— —

Sold on the 21st December.

So. Carn Brea	7 17 2 14	66 15 0	526 1	5—Carvedras.
West Fowey Cons.	17 16 2 5	68 0 0	1212 5	0— —

Sold on the 22d December.

Bottle Hill	2 17 3 20	68 15 0	199 2	7—Charlestown.
ditto	0 2 0 23	50 0 0	5 5	9— ditto
ditto	1 5 2 17	68 15 0	88 3	6— ditto
ditto	0 1 2 4	50 0 0	3 16	9— ditto

TINCROFT MINE sold Black Tin as under.

Dec. 19	9 7 1 14	67 5 0	£ 630 1	0—Boltitho & Sons.
„ 21	2 17 3 1	73 0 0	210 16	0— ditto
„ 23	10 6 0 11	67 5 0	693 0	0—Harvey & Co.

[This tin to be placed against November cost.]

COPPER ORES.

Sold by Jas. Hallows, at LIVERPOOL, on Dec. 20, ex *Ilymane*.

Mine.	Tons.	Price per ton.	Purchasers.
LOT 2	73	£22 6 6	Williams, Foster, & Co.
3	73	22 0 0	Sweetland, Tuttle, & Co.
4	73	22 0 0	ditto
5	70	22 5 0	ditto
6	70	22 5 0	ditto
7	70	22 0 0	ditto

COPPER ORES.

Sampled December 4, and sold at Swansea December 24.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Cobre	96	12¾	£11 12 0	Knockmahon	82	12½	£11 19 0
ditto	94	12⅝	11 12 0	ditto	59	13½	13 0 0
ditto	93	13⅛	11 12 6	Berehaven	118	10½	9 19 0
ditto	92	13	11 12 0	Ookip	50	32½	31 5 0
ditto	48	22½	20 16 6	ditto	46	33	31 14 0
ditto	45	22⅜	20 7 0	Lochwinnoch	49	5⅜	4 16 0
ditto	11	6¼	57 8 0	ditto	27	4½	4 4 0
ditto	10	6½	59 7 0	ditto	5	9½	8 15 0
ditto	95	13¼	11 17 6	Austra. Reg.	8	53	51 0 0
ditto	90	13	11 19 0	ditto	1	53½	51 0 0

TOTAL PRODUCE.

Cobre	654	£9695 16 0	Ookip 96 £3021 17 0
Knockmahon	141	1746 18 0	Lochwinnoch 81 392 7 0
Berehaven	118	1174 2 0	Australian Regulus 9 459 0 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Copper Miners' Company	236	£5482 8 0
Freeman and Co.	136	1618 1 6
P. Grenfell and Sons	92	1067 4 0
Sims, Willyams, and Co	21	1224 10 0
Vivian and Sons	353	3820 3 0
Williams, Foster, and Co.	281	3277 13 6
Total	1119	£16,490 0 0

Copper Ores for sale at Swansea, Jan. 7.—Cobre 96, 95, 86, 69, 60, 59, 58, 5, 12, 92, 91, 90, 89, 75, 74, 51, 50, 48, 10—Wheal Maria 57, 40, 36—Ookip 44—Union ore 68, 63, 27, 27—Holyford 5, 1—Spanish 5, 1—Copper dross 1.—Total, 1585 tons.

AVERAGES.

	Produce.	Price.	Standard.
British	10½	£ 9 15 0	£113 14 6
Foreign	17¾	16 18 0	107 14 0
Sale	15½	£14 14 6	£109 8 6

Totals—British, 340; Foreign, 779=1119 tons (21 cwts.)

AVERAGES OF LAST SALE.

	Produce.	Price.	Standard.
British	10 7-16	£10 3 0	£118 17 0
Foreign	13½	13 6 0	114 17 6
Sale	11 9-16	£11 5 6	£117 4 0

Totals—British, 937; Foreign, 513=1450 tons (21 cwts.)

COPPER ORES.

Sampled Dec. 11, and sold at Tabb's Hotel, Redruth, Dec. 26.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Great Wheal Busy	82	£2 9 0	Clifford Amalgamated	25	£2 5 6
ditto	78	2 3 0	ditto	20	0 5 6
ditto	66	2 0 6	ditto	16	2 13 0
ditto	64	2 8 0	West Damsel	62	4 13 6
ditto	62	2 9 0	ditto	58	4 7 6
ditto	58	3 9 6	ditto	54	5 1 6
ditto	56	3 2 0	ditto	48	4 14 6
ditto	53	1 5 0	ditto	42	3 14 6
ditto	46	2 2 0	ditto	36	1 15 0
ditto	39	2 8 6	Tywarnhaile	47	4 5 0
ditto	36	3 1 0	ditto	46	2 19 6
Fowey Consols	100	5 10 6	ditto	45	2 0 6
ditto	98	5 13 0	ditto	42	2 10 6
ditto	81	6 12 6	ditto	40	2 10 6
ditto	78	6 14 6	ditto	34	4 1 0
ditto	63	6 8 0	ditto	16	3 17 0
ditto	60	3 1 6	South Crinnis	72	4 11 6
South Caradon	105	6 1 0	ditto	68	3 14 0
ditto	83	6 5 6	ditto	32	6 18 0
ditto	81	9 8 0	Craddock Moor	50	10 7 6
ditto	52	9 1 0	ditto	42	7 14 0
ditto	51	16 14 6	North Grambler	41	6 0 0
ditto	39	17 9 6	ditto	39	7 17 6
ditto	36	1 9 6	Gonamena	29	6 6 0
ditto	23	6 10 6	ditto	17	3 1 6
Clifford Amalgamated	75	4 5 0	Grambler & St. Aubyn.	33	7 18 6
ditto	74	2 12 0	Cuddra	30	3 14 6
ditto	40	0 16 6	Trenouth's Ore	60	1 13 6
ditto	37	0 17 6	East Tolgus	22	4 2 0
ditto	33	5 15 0	Creegbrawse	16	4 4 6

TOTAL PRODUCE.

Great Wh. Busy	640	£1550 2 6	North Grambler	80	£ 553 2 6
Fowey Consols	480	2755 1 6	Gonamena	46	234 19 6
South Caradon	470	4125 15 0	Gram. & St. Aubyn.	33	261 10 6
Clifford Amalgama.	320	871 1 0	Cuddra	30	111 15 0
West Damsel	300	1263 18 0	Trenouth's Ore	30	50 5 0
Tywarnhaile	270	834 1 6	East Tolgus	22	90 4 0
South Crinnis	172	801 16 0	Creegbrawse	16	67 12 0
Craddock Moor	92	842 3 0			

Average Standard £132 7 0 | Average Produce 5¾
Average Price per ton £ 4 16 0
Quantity of Ore 3001 tons | Quantity of Fine Copper, 171 tons 5 cwts.
Amount of Money £14,413 7 0

LAST SALE.—Average Standard £135 12 0.—Average Produce 5⅞
Standard of corresponding sale last month, £138 15 0.—Produce, 5⅞.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Vivian and Sons	383	£2380 19 9
Freeman and Co.	205	603 7 0
Grenfell and Sons	193⅓	1458 8 2
Crown Copper Company	87	408 16 6
Sims, Willyams, and Co.	356	1765 0 3
Williams, Foster, and Co.	365	2674 9 0
Mason and Elkington	656	3087 13 0
F. Bankart	193	609 8 6
Copper Miners' Company	143	517 16 0
Charles Lambert	208½	468 12 2
Sweetland and Co.	211⅔	439 15 8
Total	3001	£14,413 7 0

Copper ores for sale on Thursday next, at Tabb's Hotel, Redruth.—Mines and parcels.—Wheal Clifford Amalgamated 760—West Seton 449—North Roskear 251—South Tolgus 250—Wheal Basset 232—South Frances 201—Wheal Seton and Pendarves 179—East Pool 112—East Basset 103—Tolcarne 90—North Crofty 80—West Stray Park 56—Tresavean 55—Jackson's Ore 55—Wheal Uny 49—Crane 28—Haise's Ore 17—Wheal Harriett 12—Wheal Kitty 9.—Total, 2988 tons.

Copper ores for sale on Thursday week, at Tabb's Hotel, Redruth.—Mines and Parcels.—West Basset 480—East Carn Brea 345—Alfred Consols 286—Par Consols 264—Wheal Margery 232—Tolvadden 186—Copper Hill 131—North Basset 107—Wheal Buller 106—Wheal Agar 97—West Alfred Consols 92—East Rosewarne 82—South Crenver 62—West Trevelyan 36—Treffry's Regulus 21—Clijah and Wentworth 17—Rosewarne Consols 15—Wheal Union 13—Providence Mines 10.—Total, 2502 tons.

FOURTH SALE IN DECEMBER.

Years.	Tons.	Prod.	Amount.	Standard.	Ore copper.	Cake cop.
1851	2002	6⅞	£9,470 16 0	£107 18 0	£68 5 0	£88 10
1852	3369	5⅝	18,387 10 6	145 19 0	97 1 0	102 10
1853	2957	6⅛	19,429 3 6	152 14 0	107 14 0	126 0
1854	3780	6⅞	21,642 6 6	142 17 0	96 12 0	126 0
1855	3069	5⅝	16,539 13 6	144 5 0	95 10 0	126 0
1856	3699	6¼	26,234 7 0	150 18 9	108 15 0	126 0
1857	1978	6¼	10,882 2 0	127 5 0	84 17 0	107 10
1858	2935	6⅞	19,410 9 6	136 7 0	96 6 0	107 10
1859	2634	6¼	17,555 15 6	144 17 0	102 11 0	112 0
1860	2740	6⅞	15,953 0 0	135 11 0	92 0 0	102 10

The copper in the ore expresses the nett price per ton of copper paid to the miner.

Now ready, price 1s.,

THE PROGRESS OF MINING IN 1860,
BEING THE SEVENTEENTH ANNUAL REVIEW.
BY J. Y. WATSON, F.G.S., Author of the *Compendium of British Mining* (published in 1843), *Gleanings among Mines and Miners*, &c.

The SIXTEENTH ANNUAL REVIEW OF MINING PROGRESS appeared in the MINING JOURNAL of December 31, 1859, and January 7, 1860.

A FEW COPIES of the REVIEW OF 1855, containing Statistics of the Metal Trade the Dividends and Percentage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also a FEW COPIES of the REVIEW OF 1852, 1853, and 1854, MAY BE HAD on application at Messrs. WATSON and CUELL'S Mining offices, 1, St. Michael's-alley, Cornhill, London.

Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL. 64

WATSON AND CUELL'S MINING CIRCULAR,
published every Thursday morning, price 6d. or £1 1s. per annum, contains Special Reports of Mines, and the Latest Intelligence from the Mining Districts, from an exclusive resident agent; also, Special Recommendations and Advice upon all subjects connected with Mining, and interesting to investors and speculators. A Record of Daily Transactions in the Share Market, Metal Sales, and General Share Lists, &c. Edited by J. Y. WATSON F.G.S., and published by WATSON and CUELL, 1, St. Michael's-alley, Cornhill.

N.B. Messrs. WATSON and CUELL have made a selection of a few dividend and progressive mines, which they have reason to believe will pay good interest, with a probability, also, of a rise in value, the names and particulars of which will be furnished on application. 65

INVESTMENTS IN BRITISH MINES.—Mr. MURCHISON'S REVIEW OF BRITISH MINING for the QUARTER ENDING 30TH MARCH, 1861, with Particulars of the Principal Dividend and Progressive Mines, Table of the Dividends Paid in the last Five Years, &c., is NOW READY.
Price One Shilling. At 117, Bishopsgate-street Within, London, E.C.
Reliable information and advice will at any time be given on application.
Also, COPIES of "BRITISH MINES CONSIDERED AS AN INVESTMENT." By J. H. MURCHISON, Esq., F.G.S., F.S.S. Pp. 356, boards, price 3s. 6d., by post 4s. See advertisement in another column.

THE MINING AND SMELTING MAGAZINE,
No. I., for January, contains:—
1.—The History and Present Position of the British Coal Trade. By EDWARD HULL, B.A., F.G.S., of the Geological Survey, author of the "Coal Fields of Great Britain."
2.—Chapters on the Methods of Working and Ventilating Coal Mines. By MARK FRYAR, F.G.S., School of Mines, Glasgow.
3.—On the Processes of Separating Black Tin from Wolfram, at East Pool Mine, Illogan, Cornwall.
4.—Description of the New Form of "Fixed Frame" in use at Cook's Kitchen and other mines in West Cornwall.
5.—Hundt's Concave Circular Buddle. Illustrated by a lithographic plate.
6.—Mineral Statistics of India.
7.—The "Standards" of Tin Ore.
8.—List of Copper Smelters in England and Wales.
9.—Dr. Percy on the "Standard" of Copper Ore, and the Associated Copper Smelters.
10.—Reviews: Dr. PERCY'S "Metallurgy," Mr. WALLACE on "Mineral Deposits," and BRISTOW'S "Glossary of Mineralogy."
11.—The Government School of Mines, and Museum of Practical Geology—the Geological Survey.
12.—Mining, Quarrying, and Metallurgical Intelligence, including special information from various districts and mines, and five sections of Botallack Mine, East Carn Brea Mine, and Dale Mine. Abstracts of Mining Accounts and Meetings, Statistics of all Sales of Ore.
13.—Records of the Metal and Mining Share Markets, giving the fullest and most authentic information of all the movements of the month.
Eighty pages, demy 8vo. Illustrated by thirteen woodcuts, and a lithographic plate of Hundt's buddle. Price 1s.
Published at the office, 79, Old Broad-street. Sold by Simpkin, Marshall, and Co., Stationers' Hall-court; and at the *Mining Journal* office, 26, Fleet-street, London, E.C.
*** A single copy post free from the office for 13 postage stamps. 66

Now ready, large octavo, half bound, price 10s. 6d.,

BOOK-KEEPING FOR IRONWORKS:
A simple and complete system of double entry, expressly adapted for the iron trade, showing the method of ascertaining the cost per ton of the puddled bar and finished iron. By G. J. WILLIAMS, Accountant,
Eighteen years cashier and book-keeper in extensive works.
"A book which renders systematic book-keeping as simple as the writing of an invoice." London: *Mining Journal* office, 26, Fleet-street, London, E.C. 67

REDUCTION IN PRICE OF THE ATHENÆUM.—The proprietors, taking advantage of the Abolition of the Paper Duty, have resolved that the price should be REDUCED TO THREEPENCE. 68

GEOLOGICAL SECTIONS OF THE ORDNANCE SURVEY OF ENGLAND, WALES, AND IRELAND, on three different scales, coloured. MAPS OF ENGLAND, WALES, SCOTLAND, IRELAND, SPAIN, and OTHER MINERAL DISTRICTS, on various scales. PLANS, SECTIONS, and MAPS LITHOGRAPHED, TRACED, and COLOURED or MOUNTED, on the shortest notice, by LETTS, SON, and Co., Royal Exchange, E.C. Illustrated catalogues may be had on application. 70

JOINT-STOCK COMPANIES PROMOTED,
REPORTS, PROSPECTUSES, NEWSPAPER NOTICES, &c., PREPARED, and ADVERTISING ECONOMISED, by MR. LEE STEVENS, No. 36, CANNON STREET, LONDON, E.C.
MINING AND ENGINEERING CONTRACTS EFFECTED. 71

Notices to Correspondents.

PARAFFIN OIL.—"C. D." (Newcastle).—The complaints that paraffin oil lamps burn less brilliantly than formerly may be attributed to two causes—the lamps are frequently carelessly and commonly made, so that the combustion is imperfect; and, secondly, the clamour of the public for light-coloured and inodorous oils has necessitated the use of chemical substances in the bleaching and deodorising of them which removes some of the best properties of the oil. With properly-constructed lamps no smell arises from the oils whilst in them or in burning, and the dark strong oils are to be preferred in many respects; they give a more brilliant light, and do not smoke the glasses as the over-purified oils are apt to do; they are quite as safe as the pale oils—indeed, it is very unusual to find anything but a pale oil explosive. All mineral oils of 820 specific gravity or upwards are positively inexplosive, and it is only in very rare cases that any lighter oil is sold. The specific gravity will usually be found about 825 to 830, and so long as it does not go below 820 there is no more danger in using mineral oil than the old lamp oils.

EAST KONGSBERG MINING COMPANY.—In reply to several shareholders who complain of the non-publication of information concerning this company, we may state that the secretary informs us the directors have decided that nothing further shall be published until the company is in a more prosperous condition than at present. The secretary states that the reason of this decision is, that the directors found that the publication of the reports of the appearance and prospects of the mine had no good effect whatever, either in raising the price of the shares in the market, or in inducing the public to subscribe for the unallotted shares, of which the company have a large number. We understand that two of the mines are about paying working cost, and that there are others of some promise, so that there are hopes of the publication of reports being recommenced at no very distant date. The company have now about 900 ozs. of silver at the mines, which would be worth about 225*l.*, and as the amount of capital subscribed has been very limited such a result is regarded as anything but discouraging.

CROCKETH SLATE COMPANY.—Can anyone interested kindly inform me if there is truth in the rumour that a complicated lawsuit is impending? I was in the locality of the property lately, and was assured that legal difficulties existed, and would shortly be before the public law courts. As such an event considerably interests all concerned as shareholders, I am anxious to learn the facts.—S.

SOUTH DEVON IRON AND GENERAL MINING COMPANY.—Can you inform me of the means by which I can obtain some information as to what was determined upon at the recent "private" meetings of shareholders, or the reason of the total exclusion from the Journal of any reference whatever to the subject? It is to be hoped that this apparently studied withholding of facts from the public of the position and prospects of the undertaking does not portend a more permanent quiet?—INQUIRER: *Stock Exchange*.

MINERALS AND LODES.—Since Mr. Ennor wishes me to "pocket the affront" he fancies I have received, I will do so, and also follow his other advice very shortly, so that I may sooner have the pleasure to join him at O-port-o.—G. F. GOBLE.

THE RICHEST GOLD FIELDS ON EARTH.—Though the English press state that explorers have again been foiled in attempting to cross the wilds of Australia, I, nevertheless, hope some parties will soon succeed; because more than 30 years since I offered my services to undertake similar performances (as per letters published above 10 years ago in England), when I also asserted that I believed all around the Gulf of Carpentaria will be found the richest area for native gold on this globe. Next week I will send a few of my reasons; in the meanwhile, the enclosed facts will show I am no stranger to foreign climes, or to the gold regions of the southern hemisphere.—G. F. GOBLE.
[The documents enclosed comprise copies of a letter from Mr. Goble, dated Fremantle, Swan River, March 24, 1830, to the Colonial Secretary at Perth, offering his services to traverse and explore the central Australian continent, from Swan River to Sydney; and of another letter, dated Launceston, Van Dieman's Land, Nov. 19, 1851, offering to undertake the search for Dr. Leichardt. The copies of the official replies are also given, and some interesting remarks concerning Mr. Goble's travels.]

GOLDEN AGE.—Whenever "An Old Correspondent" thinks prudent to give his proper name, then I will answer his conglomerated note in detail.—G. F. GOBLE.

PRESENT STATE OF THE MANUFACTURE OF RAILS—RECENT IMPROVEMENTS ON FOREIGN RAILWAYS.—My article on foreign rails, published in the Journal of Dec. 7, requires a few corrections. Speaking of Messrs. Jacobi, Haniel, Huyssen and Co.'s establishment at Oberhausen, Westphalia, I wrote that the *exterior* form of their blast furnaces is square, but it has been misprinted *interior* form. The omission of the figures representing the way the rail packets are formed for the Westphalia line renders the letter-press description somewhat unintelligible as it stands; a few words, however, will suffice to make it quite plain. In the description of the *top* plate, it should be stated that the packet from which it is made is 7 zolls wide, and the comma after the word *plates* should be advanced a word, so as to make the phrase to which it belongs read:—"The interior layers are of two plates each, of puddle-iron," &c. The description of the *bottom* plate is rather more ailing, and requires to be entirely "rolled over." It (the packet) is composed of seven layers of fibrous iron, each layer being ¾ zoll thick. The two bottom and the two top layers (this is bad grammar, but never mind) are composed of fibrous rail ends rolled into plates. The packet, like that for the top plate, is 7 zolls wide; it is rolled, edgewise, to a thickness of 1 zoll. With the aid of these two plates the rail packet itself is formed. (Strike out the words "the corner pieces are omitted," they relate to something in the figure). It is 9¼ zolls high, and 7 zolls wide, containing, besides the top and bottom plates just described, seven layers, each ⅞ zoll thick. The insertion of these items will render the description quite clear. At the close of the article, speaking of the test to which the rails of the Société Anonyme de Castlenau are subjected, 2·50 metres are misprinted 250 metres. In a previous article, on the "Mons Coal Mines," speaking of the new winding-engines, a misprint occurs, which, as the original word used was not, I believe, strictly a correct one, renders the case quite hopeless. I allude to the statement that the engines have "almost no *slags*." What I meant to say is, that they have almost no *cut off* (*détente* in French), or that the steam is worked with very little expansion. I forgot to add that the absolute pressure on the boilers is about 4 to 4½ atmospheres.—E. SHERMAN GOULD, C.E.: *Freiberg, Saxony*.

FELYN WOOD.—This unfortunate concern is evidently in difficulties, but it may be made much worse if every creditor becomes a plaintiff employing an attorney against every shareholder, each one of whom will also have to employ an attorney. Let, then, all the shareholders agree to have the concern wound-up as cheaply as possible at once, either in Chancery, Bankruptcy, or the Stannaries Court; the last is, I believe, the proper tribunal. The machinery, lease, &c., will then be sold to pay the merchants and others having claims against the company, and the deficiency, if any, must be divided *pro rata* among the adventurers, the list of whom will have to be settled by the Judge, Master, Registrar, or other officer of the Court having the conduct of the winding-up of the defunct company.—W. T.

MINERALS UNDER THE SEA.—Does the Duchy right to minerals under the sea extend to Devonshire? In Cornwall it belongs to them certainly. I had thought the Duchy were the party owning here; until yesterday it was suggested that it belonged to the lord of the manor (a private person), and there seems reason in the argument that in Cornwall, where there is Duchy property, the right belongs to the Duchy; but here there is no Duchy property, so the right belongs to the lord of the manor. If the right do not belong to the Duchy I presume there can be no other claimant than the lord of the manor, and that if mineral right were sold to any private person they could lease, but such has not been the case. If any of your correspondents could enlighten me upon this subject I shall feel obliged.—INQUIRER.

FURZE HILL WOOD.—Seeing several enquiries relative to this mine and the engine, in reply to "Inquirer," I am sorry to inform him that the engine is not working, and I cannot say from appearances when it will work; at any rate, it will not be for some time, as it is not all on the mine. I have just seen the boiler slowly winding its way up a field; and as for stamping tin, and selling a batch, I do not yet see any stamps, although the report says they are bought; so "Pick and Gad," like Job, must have more patience; but still I agree with him that time is money in mining, and surely the aggressors in this delay should be the sufferers, and not the body of shareholders.—BAL CAPTAIN: *Horrabridge*.

"RETROSPECT."—The leader in last week's Journal was so suited to investors, and so convincing to my intellect, that I at once acted upon it, and bought East Carn Brea shares. An occasional article to guide, when you are possessed of such special information, would be very acceptable, not only to me but to most of your subscribers, seeking information through your columns.—R. H.: *Salisbury, Dec.* 26.

VENTILATION OF COLLIERIES.—The letter of Mr. R. H. Hughes was received too late for insertion in this day's Journal: it shall appear next week.

*** With the MINING JOURNAL of Dec. 7 we gave a SUPPLEMENT, which contains—Reviews of Dr. Percy's New Metallurgical Text-Book, and Mr. Smiles's "Lives of the Engineers"—also papers on Remarkable Mineral Deposit; Steam on Steep Roads—Important Improvements; Prosper United Mines; The Mining District in which East Wheal Seton is situated, with map; Improved Prospects of English Investments on the Continent; Furnaces; the Government Guarantee on Indian Railways; Economic Railway; Water Locomotion; Locomotion on Common Roads; Mining in Cumberland; Artificial Stone, and Preservation of Timber, &c.

*** With the MINING JOURNAL of Nov. 23 we gave a SUPPLEMENT, which contains—The School of Mines, Andersonian University, Glasgow; Miners' Association of Cornwall and Devon; Cornish Mining; Pyrites; Observations on the Coal Mines of Belgium—No. III.; Coals Classified; Great Tywarnhaile Mining Company; On the Internal Heat of the Earth; The Telegraph to India; A New American Gas Coal; Victor Emanuel Mine; St. John del Rey Mine; Steam-Engines and Boilers; Lanharry Hematite Iron Ore Company; Water as a Fuel; Letts's Diaries; &c.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, DECEMBER 28, 1861.

During the current quarter the quantity of copper ore, the produce of mines in Cornwall and Devon, sold at the Cornwall Ticketings, has been 48,493 tons, which contained 2940 tons 3 cwts. of fine copper, and realised 265,513*l.* 9s. 3d.; being equal to an average of 5*l.* 10s. per ton of ore, and 90*l.* 6s. per ton of copper in the ore. During the same period the Foreign and Irish ores sold at the Swansea Ticketings has amounted to 9467 tons, which contained 1194 tons 12½ cwts. of fine copper, and realised 114,905*l.* 9s., being equal to an average of 12*l.* 3s. per ton of ore, and 96*l.* 4s. per ton of copper in the ore. The average produce of the ore sold at the Cornwall Ticketings was 6 1-16, whilst that sold at Swansea gave an average produce of 12 9-16. From these figures it will be seen that the aggregate sales during the quarter have been 57,960 tons of ore, containing 4134 tons 12½ cwts. of fine copper, and realising 380,418*l.* 18s. 3d. The subjoined is a summary of the results of the periodical sales in Cornwall and at Swansea respectively.

The ore sold at the Cornish Ticketings was:—

Date.	Standard.	Produce.	Price.	Tons ore.	Fine cop.	Amount.
Oct. 3....	£134 10	6¼	£5 13 0	3704	229 13	£20,707 13 6
„ 10....	133 6	6¾	6 8 0	2997	201 18	18,674 19 0
„ 17....	134 9	6½	5 10 6	5347	329 8	29,586 7 6
„ 24....	136 19	5⅞	5 6 6	2320	136 16	12,358 0 6
„ 31....	133 19	7	6 12 0	3553	250 1	23,470 13 6
Nov. 7....	138 15	6½	5 15 6	3419	210 6	19,776 14 9
„ 31....	139 2	5¾	5 6 0	6213	359 8	32,917 8 0
„ 28....	138 15	5⅞	5 7 6	4148	242 13	22,273 18 6
Dec. 5....	136 2	6¾	5 14 0	4679	290 14	26,704 12 6
„ 12....	132 12	6½	5 9 6	3073	190 16	16,855 11 6
„ 19....	135 12	5¾	4 11 6	6039	327 5	27,774 3 0
„ 26....	132 7	5¾	4 16 0	3001	171 5	14,413 7 0
Total for the quarter				48,493	2940 3 ..	£265,513 9 3
Quarter ending September, 1861				44,647 ..	2907 13 ..	243,211 18 0
Ditto ending June, 1861.....				46,186 ..	2928 8 ..	255,877 7 0
Ditto ending March, 1861				41,402 ..	2709 19 ..	240,311 19 6
Total for the year.....				180,728 ..	£11,486 3 ..	£1,004,914 13 9
Showing a quarterly average of				45,182 ..	2,871 11 ..	251,228 13 5
Corresponding quarter, Dec., 1860 ..				45,207 ..	2949 7 ..	264,327 7 0

The ore sold at the Swansea Ticketings was:—

Date.	Standard.	Produce.	Price.	Tons ore.	Fine cop.	Amount.
Oct. 1....	£109 8 6 ..	13 1–6 ..	£12 1 6 ..	1720 ..	224 13½..	£20,769 16 6
„ 15....	111 2 0 ..	13⅝ ..	12 15 6 ..	1167 ..	159 0 ..	14,926 11 0
„ 29....	117 5 3 ..	10 15–16 ..	9 17 6 ..	1146 ..	118 3½..	11,331 6 6
Nov. 12....	116 7 0 ..	12 15–16 ..	12 16 0 ..	1485 ..	192 2½..	19,002 11 6
„ 26....	119 17 0 ..	11 9–16 ..	11 12 6 ..	1380 ..	159 11 ..	16,034 15 0
Dec. 10....	117 4 0 ..	11 9–16 ..	11 5 6 ..	1450 ..	167 13 ..	16,350 8 6
„ 24....	109 8 6 ..	15⅛ ..	14 14 6 ..	1119 ..	173 9 ..	16,490 0 0
Total for the quarter				9467 ..	1194 12½..	114,905 9 0
Quarter ending September, 1861				9155 ..	1368 14½..	117,669 2 6
Ditto ending June, 1861				11258 ..	1513 9 ..	136,731 15 0
Ditto ending March, 1861				7775 ..	1254 3½..	114,544 16 0
Total for the year				37655 ..	5330 19½..	483,851 2 6
Showing a quarterly average of.....				9414 ..	1332 15 ..	120,962 15 7
Corresponding quarter, Dec., 1860				9746 ..	1445 10¾..	134,156 7 6

The importance of our mineral industries in promoting the welfare of the country becomes each year more generally recognised, the natural consequence being that the utility of the GOVERNMENT SCHOOL OF MINES is gradually becoming more fully appreciated. During that portion of the eleventh session which has already elapsed a large amount of information of the most valuable kind has been imparted to the students, many of whom have made satisfactory progress in Chemistry, Metallurgy, Natural History, and Mining and Mineralogy. It would be unfair to direct especial attention to the course of lectures by either professor, since each is so completely master of the subject he teaches that it would be difficult to find any just cause of complaint. We have so frequently pointed out the advantages of a sound scientific education to practical men, that our views upon the subject must be well known to our readers, and we trust that the time is not distant when every mine in the kingdom will be under the superintendence of well-educated practical men.

With respect to the Government School of Mines, it may be objected that the cost of studying there is higher than many to whom the instruction would be particularly useful can afford; but it should be remembered that the School possesses facilities for the acquisition of a complete mining education which can nowhere else be found, and that frequent and valuable additions are made to the prizes and exhibitions placed within the reach of the students. Nor is this all; the Secretary of State for India has issued an order that the certificate of the Professor of Metallurgy shall be received for appointments in the Mints of India, and in all official affairs connected with mining and the allied sciences the preference is given, and very properly so, to those who have studied in Jermyn-street. The Duke of CORNWALL'S exhibitions are opened to all who have passed through the studies of the first two years of the curriculum required for associates, and the Government offer money prizes to those who occupy the first and second places in the final examinations of each course of lectures. A free scholarship is offered to any person obtaining a Queen's gold medal at the May examination of the Science classes of the Department of Science and Art, and the same privilege is accorded to certain provincial schools. Two medals, carrying prizes of books, are annually competed for, and the director of the institution, Sir R. I. MURCHISON, very generously gives a prize of 25*l.* each year to the student who stands highest in the Geological examination, and in any one of the other subjects taught in the School of Mines.

We believe that the possession by miners of such knowledge as that obtainable at the School of Mines would prove extremely beneficial to mine adventurers, both pecuniarily and otherwise, and, therefore, consider that the establishment cannot be too well supported.

TREATMENT OF COPPER ORES.

An invention, which relates to certain processes for obtaining copper and other products from their ores, has been patented by Messrs. Robert Laing and Israel Swindells, of Wigan. It consists, firstly, in the application of steam for the more effectual separation of the metals in a soluble state. For this purpose, after crushing the ore, they roast or calcine it, if a sulphuret, in a kiln or close furnace, that they may collect the gases, which they apply in an after part of the process; or they use the burned ores, after having been used in the manufacture of sulphuric acid. They place these calcined or burned ores in any convenient vessel, and apply steam, digesting for two or more hours—the time required depending upon the amount of heat employed, and the quantity of ore to be operated upon at one time. The second part of the invention consists in the application of acid gases, for the purpose of oxidising and rendering soluble the various metals contained in the ore. They place the ore in heaps, on water-tight foundations, after the previous process of washing, to any convenient depth, and convey the gases to these heaps in any convenient manner, supplying them with steam; and further, in the case of sulphurous or nitrous acid gases, they add a large supply of atmospheric air; they also, from time to time, wash down the soluble portions of the metals, and they also apply the gases to carbonates and other ores not being sulphurets. Another part of the invention consists in using the acid gases going to waste in the manufacture of sulphuric or sulphurous acids, and in the manufacture of salt cake, employing them in the manner before described, and for the same purpose.

Another invention, for effecting a similar object, has been patented by M. Puistenne, of Paris. His invention consists in treating the ores with sulphur and chloride of lime; and, in carrying out the invention, the pyrites or ore to be operated upon is to be pulverised, after being roasted, or not. If the ore has been roasted it is mixed in proportions varying according to the richness of the ore and the nature of the gangue, with the sulphur and the chloride of lime, and then heated, when a lump, or mass, of sulphuret of copper will be obtained. This impure mass of copper will, when roasted and heated with carbon, furnish malleable metallic copper. This same sulphuret of copper may also be mixed in suitable proportions with natural or artificial oxide of copper, and, by the application of heat, metallic copper will be obtained from the two mixed bodies. By causing sulphur and chloride of lime to act either separately or in combination on the ore, a sulphuret of copper may be obtained at one operation, without roasting, and metallic copper when the roasting has been carried to a proper point. Othey chlorides, besides chloride of lime, may be employed, and the inventor has also obtained good results by heating a mixture of sulphur and lime with copper pyrites.

NEW MODE OF COKING SLACK.

From statistics collected with the utmost care, it appears that no less than 4,000,000 tons of slack, beyond that for which a use is found, is annually raised from the collieries of Great Britain; but from an interesting paper "On a New Mode of Coking in Ovens applied to the Staffordshire Slack," read before the Institution of Mechanical Engineers, by Mr. A. B. Cochrane, of Dudley, it may be hoped that these 4,000,000 tons of waste may henceforth make its appearance in the market in the shape of nearly 2,500,000 tons of good coke, the value of which would certainly not be less than 1,500,000*l.* An invention which promises such a beneficial result as this is undoubtedly worthy of consideration; and from the success which has attended Mr. Cochrane's operations, it seems probable that its general adoption may be looked forward to. At his Tursdale Colliery, Mr. Cochrane has adopted an improved arrangement of coke-ovens, designed by Mr. Eaton, of Bordesux, which combines the advantage of a block of ovens communicating with a single stack, and of the old open-topped oven. At Tursdale, Mr. Cochrane has two blocks of twelve ovens each burning, and is building another; and a second block has also been erected at Woodside, which has been at work for two months. The Staffordshire thick coal slack is mixed with bituminous slack from South Wales, or with a little pitch, and upon being coked an excellent metallurgic coke is produced. A compound of 14 per cent. Staffordshire slack, 44 per cent. Welsh slack, and 12 per cent. pitch, resulted in a regular yield of from 60 to 65 per cent. of coke. As these results show that the mixture of the various qualities of slack is absolutely beneficial to the production of good coke, the proposition is the more worthy of adoption, inasmuch as the waste in all districts will be avoided. By Mr. Eaton's invention twelve ovens are arranged around a common centre; but to obviate the inconvenience usually encountered of waste of space, he has devised an ingenious form of flues, which, although very simple to construct, are not easy to explain without the assistance of diagrams. An idea of the plan may, however, perhaps be formed from the statement that the block of masonry which contains the flues forms a duodecagon about 17 feet across, in the middle of which is a square chimney, with its sides facing the first, fourth, seventh, and tenth faces of the duodecagon. From the angles of the duodecagon straight walls project, about 9 feet long, forming radii from such angles; and from the outer extremity of these walls the masonry is continued in a curvilinear direction, both right and left, until they come sufficiently near to each other to form the door of the oven: the top is, of course, covered in as usual. The flues from the first, fourth, seventh, and tenth ovens run straight to the chimney; but the remaining flues are in the form of obtuse angles, so that they also may enter perpendicularly to the face of the chimney. Between the ovens and the chimney are regulators, which admit of the draught from any particular oven being stopped, and the further progress of combustion being thus arrested. Consequently, any one or more ovens may be stopped, and the coke drawn, whilst the coking is progressing in the others. To ensure an equal draught in every oven, the chimney is divided by two oblique walls crossing each other, and which extend a short distance above the outlet of the flues.

There is an arrangement for filling in the slack, &c., by a hopper beneath a tram which runs over the ovens. The mode of working these ovens is, in the first place, to dry them off in the usual way, which takes four to six days from the first lighting of the fires. When sufficiently heated, the ovens Nos. 1, 4, 7, and 10 are cleared of ashes and charged on the first day, the heat being purposely kept up in the rest of the ovens till they are in their turn charged. On the second day the ovens Nos. 2, 5, 8, and 11 are charged, and on the third Nos. 3, 6, 9, 12. By this plan of charging the heat of Nos. 12 and 2 is assisting to impart heat through the partition walls to No. 1 between them; the same takes place with Nos. 4, 7, and 10, each between a pair of warm ovens. For 24 hours, therefore, Nos. 1, 4, 7, and 10 have the advantage of adjacent heat, by which time they have acquired sufficient temperature to permit of the drawing and charging of the one set of adjacent ovens Nos. 2, 5, 8, and 11 on the second day without injury. Indeed, the first ovens have acquired a sufficient degree of temperature to assist in starting the operation of coking in the ovens charged on the second day. The same remarks apply to the charging of ovens on the third day, those of the first and second day both now assisting to start the coking process in Nos. 3, 6, 9, and 12, charged on the third day. For 24 hours the ovens charged on the first and second day are now reacting upon one another, whilst those charged on the third day are being urged forward to a degree which will enable them on the fourth day to permit of the drawing and recharging of Nos. 1, 4, 7, 10.

In the discussion which followed the reading of the paper, Mr. Cochrane remarked that the main object of the plan of coking now described was to effect economy of material in ironworks by making use of the great quantity of fine slack that was at present thrown away as waste; which was of

particular importance in the South Staffordshire district, where they were gradually getting short of material by the rapid consumption of the thick coal within the limits at present worked. Attempts had previously been made to coke the fine slack by itself, but had quite failed; and he had then tried it mixed with Welsh bituminous slack, to impart the requisite binding property, and with pitch. By this means the refuse ordinarily thrown away was converted into a coke even superior to the best coke made from the large thick coal, the proportion of pitch mixed with the slack being about 27½ per cent. of pitch to 72½ of slack. The coke obtained had all the excellent qualities of the thick coal coke, and the same freedom from injurious ingredients, since the pitch imparted no noxious elements. In reply to Mr. Solly, he stated that the thick coal slack would not bind alone. Mr. Samuel Lloyd suggested economising any waste heat there might be by employing it to heat a boiler; but Mr. Cochrane explained that in this instance the boilers would be too far from the ovens. In reply to Mr. Swindell, who enquired the value in the blast-furnace of coke made by the new method as compared with the best North of England coke, he replied that there was no question as to the superiority of the Staffordshire slack; it made a better and purer coke than the North Country coals, whether coked with pitch alone or with a mixture of Welsh slack and pitch. With Durham coke they were not able to make a good open-faced grey forge-pig, but with this coke good grey pig was regularly made. It also gave a better yield in the furnace than either the Durham coke or that made from the thick coal. Mr. J. Paddon observed that the economy and advantage of any mode of coking would vary much in different localities, according to the quality and cost of materials in the district. In Staffordshire it was a great object to economise the waste slack now thrown away as useless; and the plan of coking just described converted into a valuable fuel what was otherwise worthless. In some parts of South Wales also there was material which had never before been converted into coke, such as the Aberdare slack and other small coals, and this was now coked in the new ovens by mixing with it a portion of bituminous slack. In other parts of South Wales, however, the case was not the same, the cost of slack being not more than 2s. or 3s. per ton less than that of the whole coal: where the slack was bituminous it made good coke by itself without any mixture, and anthracite slack was mixed with half as much of the bituminous slack, producing one of the best blast-furnace cokes in South Wales, which cost only 8s. 6d. or 9s. per ton. The value of the new ovens, he thought, had been rather understated in the paper than the contrary, the coke having been weighed dry immediately on being drawn; but if stacked and left exposed to the atmosphere for some time, as was usually the case, it absorbed a considerable proportion of moisture, which increased the apparent weight; and in estimating the commercial value of the coke as compared with that made in the ordinary ovens, both should be weighed under the same conditions. Even without this precaution, however, the new ovens appeared decidedly superior in yield; he was satisfied they would yield in regular work as much as 70 to 75 per cent. of the coal used, and knew of one instance in which the yield reached 78 per cent., when the coke would have weighed still more if it had been left stacked after drawing. As regarded the duty of the coke in the blast-furnace, he had seen the new ovens working at the Briton Ferry Ironworks, and was informed by the furnace manager that the coke from the new ovens did fully 7 per cent. more duty, and was a finer coke, than any made from the same coal in ordinary ovens.

MINING IN SCOTLAND—No. XIII.

Since the publication of the last paper on this subject, I have received numerous letters from various parts of England and Ireland, as well as Scotland, in reference thereto, many of them requesting information on generalities—as to the comparative wages, comforts of the people, and their abilities and aptitude to become miners, as well as the numbers likely to offer their services if required; but by far the greater number of requests have been to know the terms on which Scotch landlords are disposed to grant leases. As nearly all the enquirers quote the *Mining Journal* as the source of information from which they are tempted to ask the numerous questions, I will, with your permission, Mr. Editor, condense the answers by a paper bearing on these subjects. As I shall most probably make Ireland the scene of my labours in the early part of the year, I may not have an opportunity of again referring to mining in Scotland so frequently, or so largely as has been my wont; besides which, the climate of the south-west of Ireland, to which I propose temporarily to migrate, is far more congenial in early spring, and better suited to the rambles of discovery and observation than the far North.

At the pay-table the superiority of the Scotch in point of education is palpably manifest; all the labourers, male and female, being able to sign their names well, and to understand the accounts correctly. Most of the miners employed are either Cornish, Welsh, or Irish; few of the copper miners are of Scotch origin. Large numbers apply with a desire of being instructed, and where so employed evince considerable aptitude and industrious attention; no doubt but as their services are required the supply of labour will be redundant. The wages are very high as compared with Cornish and Devon mining districts, being four shillings per stem of eight hours for miners, and half-a-crown per day for surface labourers; girls earn about nine shillings per week. Field labour and employment in manufactories will probably keep this branch always at a high rate. The scarcity of accommodation in the way of houses for miners or agents is very severely felt, and provisions of every kind are dear, as compared with other mining localities. Most of the mines are in mountainous and secluded places, to which the roads in winter are great obstacles in the way of labour; these, however, are minor difficulties, which will cure themselves in due time. At present, high wages must rule, as strangers cannot gain a livelihood at less prices; no doubt, when the residents have been instructed, the rates of remuneration will be considerably reduced. One great drawback to the success of Scotch mining generally is the paucity of good roads, and the great cost of conveying low-price ore to the markets; the distance from any part of Scotland to Swansea is considerable, and back freights scarce. The railways, too, show no disposition to encourage mineral traffic by modifying or lowering their rates. However, should a large quantity of ore be discovered, a smelting company might be established, as fuel is plentiful and cheap. At Ardrossan, Troon, and similarly situated ports, the Clyde dues would be avoided; and coal, as a return freight, always commanded. At Glasgow, Greenock, and Belfast there are good markets for metallic copper, in the rough as well as in the manufactured state.

Some years since copper smelting was tried at a place on the Clyde; ores were imported from foreign countries, but, from all I can learn, the parties did not thoroughly understand the business, nor did they possess the facilities for obtaining the varieties of copper ores, a most important feature in copper smelting. They were, besides, too far from the poor sulphurets of Cornwall and Devon. Now it is more than likely a large and constant supply may be obtained near at hand, and many ships also which visit the Clyde transship the copper they bring from abroad to Swansea, Liverpool, &c., add to this. In Glasgow large quantities of sulphuric acid are extracted from Spanish, Irish, and other ores, which yield a low percentage of copper; the refuse of these are also sent to Swansea. Should a smelting works eventually arise, this source would undoubtedly be available, and facilitate operations to mutual advantage. I fear the cupidity of the land proprietors will yet prove the most formidable obstacle; the very high dues and oppressive conditions they insist on, I opine, will deter many from embarking. The pernicious system of giving landlords bonuses for the right of breaking ground, and exacting a positive annual rental, whether the ground be productive or not, will certainly frighten any practical miner who has felt and knows what the uncertainty of mining is. It may do for neophytes, acting under the excitement of a successful speculation, but it will not do for the old hand; again, the law forms and charges in every stage, even to the mere transfer of a share, are unnecessarily expensive and cumbrous.

I am happy to say that many converts have been made during the last year, but I must also add that the success of the one has been the bane of two. The foolish people argue thus—"Mr. O, or Mr. P, has let his land to a parcel of fellows, who give him only a sixteenth; they have been at me for my land, and if they did not think it worth their while they would not come. Mr. O, they tell me, has made 200*l.* out of his mine last year; now I must have 1-8th, or 400*l.* certain, when they may go to work, or let it be—I can do without."

A very worthy laird of my acquaintance asked, and actually had paid to him, 500*l.* down, and a dead rental of 500*l.* certain for 21 years, for a piece of ground into which a pick had never been put for mining purposes, although copper and other minerals had been discovered. After working a year or two the company saw and felt their folly, and the affair was closed. I could enumurate many similar cases.

If people will be so reckless and thoughtless as to give landlords their own way in these matters it is clearly their own faults. Under such circumstances, mining cannot flourish in Scotland or anywhere else, but with fair dues, no bonuses, or dead rentals, mining has as good a chance in the Scotch mining districts as other places. Every year's experience will facilitate development, development will inspire confidence, confidence will cause influx of capital, and that will soon produce the effects always concomitant with its due employment under judicious supervision; this condition must necessarily be understood. GEORGE HENWOOD.

COPPER DEPOSITS IN SANDSTONES—No I.

Near the fashionable village and port of Gourock, on the Clyde, active measures are in progress, from which curious and instructive lessons may be expected shortly to be derived. As far as hitherto seen, the copper appears to be the mere effect of a solution of the metal arrested during the percolation of the water through the sandstone. This deposit, to an illimitable extent, yields from 1 to 3 per cent. of pure copper; there are, however, rich nodules of grey and yellow copper ore, together with considerable quantities of iron pyrites; these are not found either in masses or beds, as sufficient depth has not yet been attained; many pieces are met with that appear to have been in a state of solution, and are again resuming the solid form of a grey oxide of copper of extraordinary richness. The beds of sandstone have a southerly dip, and are traversed by thin beds of semi-coal, in some cases to such an extent that formerly the persons resident in the neighbourhood fetched it away for household purposes; at present small isolated patches are to be seen. The water in the old works prevents further exploration. That will soon be drained, as a powerful water-wheel is completed, and will be at work in a brief period.

If any data could be presumed upon by the debris left by former workers, no doubt can be entertained of the extraordinary value of the ores said to have been shipped from this place about 80 years since. From 50 tons to 60 tons of sandstone, wholly permeated with carbonate of copper, have been procured and bruised down ready for being operated upon by the wet process and precipitation, the measures for experimenting upon which are also in a forward state. The local journals are frequently publishing most favourable proofs of the former worth of these works, as they gradually develope themselves by enquiry; and one journal, in its encomiums on the ability and energy displayed, assures the public that the concern is in high and deserved favour, and promises well for the future of Gourock. Should a vein of copper be discovered, as it is hoped and expected there will be then, indeed, will the proprietors reap a rich prize, in addition to that already in their possession, to work which was their original intention. In many places similar works have been wrought with great success for a long series of years, and the sources have, in some instances, been discovered. At the Gourock Mine the effect is most strikingly developed. The promoters appear to be determined, if possible, to discover the cause, as cause there must unquestionably be. These deposits could no more be found in the situation they are than could tin be found in the stream-works of Cornwall, or gold in the fields of Australia or sands of Africa, did not tin and gold exist in regions whence these detritus have been washed. When found, as it is to be hoped it shortly will be, a great question will be solved, and a key or guide discovered to many other important but, at present, impenetrable arcana, to which we shall refer in a future series of papers. A few weeks' fine weather will enable your correspondent to send some curious information, to be published under the head of "Copper Sandstone."

PREVENTION OF STEAM-BOILER EXPLOSIONS.

For some years past an association for the prevention of steam-boiler explosions, and for effecting economy in the raising and use of steam, has been in existence in Manchester, and from the reports of the chief engineer, which have been regularly published in the *Mining Journal*, our readers must be well aware that the success which has attended the operations of the society has been complete. Not only have many valuable lives been saved, but the members have derived great pecuniary advantage by availing themselves of the information afforded them by the officers of the association. During the six years of its existence nearly 50,000 boilers have been inspected and reported upon, and dangerous defects have been discovered by the inspectors, in time to prevent accident, in 500 cases. But a more striking proof is afforded in the fact, that only three explosions have occurred to boilers inspected by this Association since its commencement, one of which was caused by over-pressure, persisted in after advice to the contrary from the association's engineer; another by neglect during the absence through illness of the regular qualified engine attendant; and the third from shortness of water, which the attendant failed to observe, although his boiler was fitted with a glass water-gauge, the deficiency arising from a break-down of the feed-valve, which was of a construction now generally discarded, and whenever met with by the association's chief engineer or inspectors, is pointed out as dangerous; while, on the other hand, it has been found, from limited enquiry only, that during that period no less than 155 fatal explosions have occurred to boilers not under the inspection of this association, which have been attended with the loss of 341 lives, in addition to serious injury to nearly 400 persons, and considerable damage to property.

After such results, it is not surprising to find that "The London Association for the Prevention of Steam-Boiler Explosions, and for Effecting Economy in the Raising and Use of Steam" should be established, nor that such an association should receive the warm support of the *élite* of the engineering profession. The constitution of the London association is precisely similar to that of its prototype at Manchester, but to compensate for the boiler-power being less concentrated elsewhere than in Manchester the subscriptions have necessarily been fixed somewhat higher, that the self-supporting character of the society may not be endangered, for it must be observed that the association is simply for mutual protection, that the whole of the subscriptions are applied to render it effective, and that there are no shareholders to receive dividends from the application of the members' subscription. That every effort will be made to attain the objects in view cannot be doubted, when we see that the council is presided over by William Fairbairn, and composed of such men as William Adams; J. F. Bateman; Frederick Braithwaite; Lionel Brough, H.M. Inspector of Mines; Robert Galloway, the Steam Inspector of the Board of Trade; A. Lamb, of the Peninsular and Oriental Company; Thomas Wicksteed; Prof. Williamson, and many others of equal celebrity; and as the society's operations are to embrace the entire district on the south of a line drawn from Yarmouth to Aberystwith, including Rugby and Warwick, there is an ample field for the association to produce an immense amount of good.

The duty of inspecting the boilers and steam-engines of the members, and all apparatus pertaining thereto, is discharged by one or more competent engineers, aided by a sufficient number of local inspectors, and we opine that if the system which the association is established to carry out were generally introduced solely into the mining districts, within the limits of its operation, almost incalculable benefit would accrue. That inspection is necessary is gradually becoming more fully recognised, and the association in question is entitled to especial patronage, since its success will afford the strongest argument that Government interference is not required. A small annual payment for each boiler ensures one examination by the engineer of the association in each year, and to three other examinations by an inspector—one of the inspections being a thorough internal and external examination of each boiler and its flues. An entrance fee is payable, but the fund thus raised will, as far as possible, be reserved by the council for the purpose of promoting such experiments and investigations as may tend to throw light upon the probable causes of boiler explosions, or may otherwise promote the objects of the association. We trust that the London society will succeed as completely as the parent association at Manchester, and certainly know no reason to anticipate any less favourable result: the association is established for an excellent object, and should receive every possible aid to enable it to attain it.

PEAT FUEL.—We understand that Mr. W. H. Buckland is progressing well with the development of his invention for manufacturing a useful and marketable fuel from peat, and in a short time he will be in a position to supply it in any quantities. We have examined some of the charcoal made by Mr. Buckland's process, and have no hesitation in stating that a more dense and strong charcoal could not be desired, whilst the cost of production is so small that it can be brought into the market at a price which will enable it to compete with coke. As the pieces can be produced of any size and shape, and as the charcoal is no more liable to fracture in transit than bituminous coal or anthracite, its use will offer many advantages, even for domestic purposes; whilst the circumstance that the peat fuel is free from sulphur and phosphorus would render it admirably adapted for the production of best quality iron, equal to charcoal iron, at the price of common coke iron, and it is probable that for this reason the article will enjoy a large demand as a substitute for metallurgical coke.

RATING OF COLLIERIES.

[FROM A CORRESPONDENT.]

Complaints are continually being made of the manner in which collieries are assessed for poor and highway rates, and everyone who makes any remarks upon the subject suggests some new mode of remedying the supposed evil; but, fortunately for general progress, the suggestions receive little attention after the hearing of an appeal has been concluded. From the information collected by Mr. Kendall, when he had his bill for taxing metallic mines before the House of Commons, the opinion seems universal that improvements in the law of rating both collieries and metallic mines are absolutely called for. Whether the impartial discussion of the subject will result in the taxation of all mines, or in their exemption, it is almost impossible to predict, but the opinion is certainly in favour of the former course—the taxation being upon an equitable and easily-understood principle. From the remarks of the various authorities who have handled the subject, it seems that the greater proportion consider, that if all mines were rated upon half of the amount paid over to the lessor or lord, no one would object, and there would be general satisfaction.

It is rumoured that in the ensuing session the subject of the rating of mines will be revived in all its force, and if Mr. Kendall and his supporters include both coal and metallic mines under one Act the point may be readily settled, and lasting benefit will be conferred upon all. The sole basis for the rate should be the royalty paid by the person working the mine or colliery, as the case may be, and the onus of proving that the tax is levied on too high an amount should be thrown upon the party by whom the tax is to be paid. Until some change is made in the law the assessors cannot do better than compute the tax as they have previously done, for in attempting changes they will only create more enemies, without adding to their list of friends.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

DEC. 26.—The preliminary meeting of the Ironmasters' Association was held at Dudley this afternoon. It excited comparatively little interest, as no change in prices was expected. Trade is very quiet, but a reduction in the price of Finished Iron below 7*l.* for bars, the present price, would not readily be submitted to; and the political aspect, in respect to peace or war with America, is so uncertain that a change would not be thought of under present circumstances, even if existing rates offered more margin for reduction. The sale of Pig-Iron for the next quarter has not commenced, and sellers' prices remain at 3*l.* 7s. 6d. to 3*l.* 5s. for very best makes of hot-blast native pigs, 3*l.* 2s. 6d. to 3*l.* for a good quality of all mine pigs, declining to as low as 2*l.* 5s. for very inferior flue cinder pigs. Hematites are offered at 3*l.* 5s., and although 3*l.* 9s. is talked of, the Barrow Company, whose quality is unexceptionable and unquestioned, are open to sell at the former rates. North Staffordshire makers are asking more money, and 2*l.* 15s. to 2*l.* 17s. 6d. is quoted for best makes.

One subject of conversation at the meeting to-day was the paragraph in the *Times*, which was appended to this letter last week, respecting the testing of the Earl of Dudley's iron at Chatham. There is something peculiar in the remarks in the Naval and Military Intelligence of the oracle of Printing-house-square. Ironmasters generally have been stated to be unable to supply iron of the proper quality; then it is said the Government must, perforce, go to the banks of the Thames for iron, no one else producing the quality; and here we have the iron of Lord Dudley puffed off. No doubt his lordship makes excellent iron, but he is not alone in that respect, and the remarks led to some fun being poked to-day into the ribs of his representatives by elbows well able to execute that particular operation. The late Mr. G. B. Thoneycroft strongly advocated official tests of iron, open to all makers. This suggestion acquires increased weight from recent circumstances. The general holidays, and the late death in the Royal House, interfere with business, but the year closes with great flatness, and much gloomy apprehension for the future. May evil auspices prove unfounded, and 1862 open with prospects, and close with the realisation of "peace and plenty" in this British land, and over the wide earth.

REPORT FROM MONMOUTH AND SOUTH WALES.

DEC. 26.—The latest American news has given some degree of confidence to those who have business connections in the New World that peace will not be disturbed. The French despatch has considerably strengthened that confidence, and the slight inaction which has taken place since the *Trent* affair is gradually disappearing. Great activity is shown at the Abernant and Gadlys Ironworks, Aberdare. The proprietors of both these works are adopting the latest improvements in iron manufacturing, and neither time or expense is spared in constructing, perhaps, the finest machinery and the largest furnaces that ever were witnessed. This indicates that Mr. Fothergill and Mr. Wayne have no apprehensions as to the future of the iron trade.

A new tin mill has just been started by Messrs. Jenkin and Co., the spirited and enterprising proprietors of the Newport Tin-plate Works, Morriston, Swansea; this has been rendered necessary by the rapidly-increasing demand for the brands which the firm supply. The new mill is propelled by a high-pressure engine from the Millbrook Iron Company's Works, which has given general satisfaction. Great rejoicings took place at the formal opening of the new mill, which will employ a number of additional hands, and consequently increase the prosperity of the district. Trade in the neighbourhood of Swansea is in an active state, the copper, tin, iron, and coal works being well employed.

The trade of Cardiff, Newport, and Swansea, as is generally the case at this time of the year, is in an inactive condition. At Newport there is a good demand for coal, but the scarcity of vessels, especially coasters, is generally complained of. The foreign arrivals at Swansea last week were only two—the *Emily Coolet*, from St. Malo, with 120 tons of zinc ore, for Dillen; and the *Augusta Schnieder*, from Santiago de Cuba, with 538 tons of copper ore, for Richardson. Intelligence has been received that two vessels which recently left this port have been burnt at sea. The *Autumnus* sailed from Swansea on June 27, with coals for Valparaiso, and the following report has been received respecting her:—"Coronel, Oct. 17: The *Esther*, Chilton, barque, from Monte Video, has arrived here, bringing with her the master and crew of the British barque *Autumnus*, which had been destroyed by fire off Cape Horn." The *Fanny*, of Shoreham, left Swansea on Sept. 10, with coals for Valparaiso; the ship took fire on Oct. 21, and all hands were immediately put to work to try to extinguish it. At 1·30 a.m., the barque *Prince Frederick William*, of Aberdeen, was seen; the *Fanny* bore down upon her, and showed signals for assistance, but she kept her course, and took no notice. At 3 a.m. the fire raged with such fury that it was found impossible to save the ship, and the master and crew took to the boat. The *Ascendant*, of London, picked them up, and they landed at Queenstown on Nov. 30.

The old Rumney Railway, it is expected, will shortly be purchased by the Monmouthshire Railway and Canal Company, in order to be converted into a passenger line. Application was made in the last session of Parliament for the necessary powers, and the only thing which now remains is for the purchase to be effected. Through the inconvenience and want of facilities which now exist on the old Rumney line, Newport has lost a large and increasing traffic. Formerly the Rhymney Iron Company shipped all their produce at Newport, but since the opening of the new railway to Cardiff the whole has been transferred to that port. It is not yet too late to recover some of the trade, and if proper facilities were at once afforded, a large quantity of coal and iron would be sent down from the Rhymney valley to Newport for shipment.

REPORT FROM NORTHUMBERLAND AND DURHAM.

DEC. 26.—There is nothing novel in the position of the Coal and Iron Trades, both being characterised by much dulness, the season tending still further to curtail operations at present. The coal has been reached by the drifts at the new works in the Plashetts coal field, and most flattering accounts are given of it. It is 5 ft. 6 in. in thickness, and said to be of excellent quality, some part of the seam being superior coking coal, and other parts good for house purposes. It is intended to lay the works out on a large scale.

A locomotive engine is in course of construction at the engine works of Mr. Horsley, at Seaton Sluice, intended to be used underground at the Bebside Colliery. The means proposed to be used for the condensation of the steam, and the consumption of smoke, have not transpired, but should the engine prove a success it will be of immense advantage and a great improvement in the means of coal hauling underground. The construction of a locomotive engine for the purpose of hauling underground has long been a desideratum, and it is to be hoped that this attempt will prove successful. We have not heard the name of the inventor.

A portion of the Bedlington Ironworks have been re-opened by Messrs. Mounsey and Dixon. The powerful engines and machinery connected with the mills and the forge have been put into efficient working order, and the foundry is in every way adapted for the manufacture of forgings, castings, bars, bolts, rails, angle iron, &c. These works have good accommodation, both by railway and sea, which, combined with the cheapness and excellent quality of the coal, they will be enabled on the most advantageous terms to supply a description of iron which will maintain the high character of the Bedlington brand. On Tuesday last Messrs. Hawks, Crawshay, and Sons, of the Gateshead Ironworks, entertained their workmen at dinner—a proceeding highly characteristic of that excellent and worthy firm. This well-known and old established firm is one of the most enterprising and celebrated on the Tyne, and enjoys an European reputation. The dinner originated in the visit of Mr. George Crawshay, of London, the head of the firm, to the works about three weeks ago, when the workmen presented him with an address expressing their joy, and welcoming him amongst them: and although Mr. Crawshay was unable to be present at the dinner his wishes have been faithfully complied with by the resident partners of the firm. Mr. Crawshay has shown that he has no small amount of admiration for the horny hands which swung the high level bridge across the Tyne from Northumberland to Durham, erected the pier at Java, and fabricated the ponderous tubes for the lighthouse at Gunfleet Sands, the 4-inch mooring chains for the British navy, and other gigantic productions in iron. The number of men employed is 1500; and there being no room in Gateshead capable of holding more than 150, the men were distributed in companies of about 50 each, at the best inns in the borough. The principals of the firm, with their clerks, foremen, and those workmen who have been more than 20 years in the service of the company, dined at the Queen's Head Hotel. Mr. George Crawshay, jun., one of the respected partners of the company, occu-

pied the chair, supported on his right by the Mayor of Gateshead (Mr. B. Bigge), and other friends who were invited. The men employed in a small branch of Messrs. Hawks, Crawshay, and Sons works, at Beamish, were also supplied with dinner. Mr. Sharpe, cashier to the establishment, occupied the chair.

At the Moot Hall Police Court, Newcastle, on Saturday, Mathew Robson was charged with committing malicious damage at Gosforth Colliery on the 12th inst. On the day in question the overman, Mr. Stewart, was showing a party through the workings. Among the places they visited was an incline plane, at the top of which they were met by the prisoner and some other workmen. The strangers were asked "to pay their footing," but they could not comply with this demand, having changed their clothes before descending the mine. After inspecting the place the visitors returned down the plane, which was very steep, having a gradient of 7 in. to the yard; and on their departure from the bank top the prisoner was heard to say to his companions he would set a tub away after them. True to his threat, Robson set off the tub with considerable force, and it overtook the men when they had got 50 yards down the bank. Mr. Stewart having fortunately heard the noise, got off the line with his friends, and thus escaped the injuries which otherwise they would doubtless have sustained. The tub, after running to the bottom, was shattered to fragments, and the contents scattered in all directions. The damage, irrespective of the stoppage of the works, was estimated at 10s.; and the magistrates, characterising the case as a most diabolical one, sent the prisoner for two months to the House of Correction, without the alternative of a fine.

At the Gateshead County Court, on Tuesday, Thomas Lambert, of Washington Colliery, who was charged last week with a breach of the colliery rules, was also charged with having broken his contract. The case was adjourned, to give the defendant an opportunity of producing evidence to show that the pit was in a dangerous state for want of proper ventilation. When the case was called to-day the defendant's witness appeared, but he himself was stated to have absconded. The case was adjourned, and a warrant granted, to give the police an opportunity of apprehending him.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

DEC. 26.—The complicated state of political affairs, and the prospect of a war with America, are topics which engross a large portion of the attention of the commercial community. The Christmas holidays have interfered with trade to a very large extent, and merchants have been much occupied in stock taking. There are few orders in the market, and a general dulness prevails. The descriptions of iron most enquired for are rails, railway springs, and plates for shipbuilding. The enquiry for Scotch pig-iron is steady, and rates are without material alteration. The coal trade is duller than has been known for a number of seasons past. The depression in the coal trade is attributable to the dulness of the manufacturing trades in Lancashire and Yorkshire, and to the unusual openness of the weather. There is a good enquiry for export, and for the London market. At a number of collieries the men are working short time; but at those works which are engaged in the supplying of large contracts the works are kept on full time. The Oakerthorpe Company (limited) stopped their ironworks some weeks ago, in consequence of the depression in trade, but they continue to work their colliery on full time. It is anticipated that the works will be recommenced as soon as the trade has so far recovered from its depression to enable the company to produce iron at a remunerative profit. The production of coal at the Staveley Works is so great that it is difficult to find sufficient wagons for the conveyance of the material. Some time ago Mr. Seymour, the resident viewer of the works, declared that he would not rest satisfied until the Seymour pit (which was called after his name) should yield 1000 tons per day. On Friday last it was determined to ascertain what quantity could be drawn out of the pit within 12¼ hours, and on the aggregate weight being calculated it was found to amount to 1147 tons 17 cwts.; and out of this quantity there only 25 tons 9 cwts. of slack. Mr. Barrow may now congratulate Mr. Seymour on having accomplished a thing which is unparalleled in the history of coal mining. The coal is the top hard of Derbyshire, and there is a great demand for it, particularly for locomotive purposes, and for marine engines.

Messrs. James Eastwood and Sons, of Litchurch, have now got their rolling-mills into good working order, and are likely to add even to their present reputation by the excellency of the work they turn out. Messrs. Eastwood's works have been gradually extending themselves from a comparatively small establishment until they are now equal in magnitude to any in the town. Taking the pig in its crude state, Messrs. Eastwood are now prepared to work it into almost any desired form, though their forged locomotive and other railway wheels are the articles to which they owe their high reputation, and by which they will, no doubt, maintain it. The number of hands at present employed at the works is upwards of 250, and continual additions are being made in the several departments.

The new branch of the Midland Railway, from Pye Bridge to Alfreton, which opens an exit for the coal of the Erewash Valley coal fields to the northern and southern markets, will be opened for passenger traffic early in the new year. The line has been worked with the mineral traffic for some time. The branch of the Midland (Rowsley and Buxton line) is nearly completed as far as Bakewell. The contractors engaged on this line, which is to extend to Whaley Bridge, are pushing forward the works with astonishing rapidity.

The Chesterfield and Silkstone Colliery Company, it is rumoured, are about to commence operations, but we can learn nothing definite that can be relied upon. A new company, called the Hasland Colliery Company, has been started; and, as the directors are all gentlemen connected with Chesterfield, near which town the colliery is situate, they are in a position to know what is necessary to make the company pay a good dividend. We understand there is a good demand for the shares.

There is nothing especially new in the lead mining district of Derbyshire, except that the Prince of Wales shares have suddenly rose in the market from 6*l.* to 10*l.* The prospects of the mine, and the possibility of working the gold to a profit, appear to have inspired the shareholders with abundant confidence. The Mill Dam Company, we understand, had a sale of ore last week, amounting to about 50 tons, and the mine itself is improving in appearance. The North Derbyshire Mine is in a very satisfactory position. The company have ceased to continue the sinking operations, on the ground, we learn, of a want of capital. The contract for sinking was let to the late contractor at 100*l.* per fathom, but so hard was the stratum that even with that apparently exorbitant price he could not make a profit of it, and abandoned it in consequence. We understand that a number of the late calls have not been paid-up, but we learn that the company are about to take proceedings against those who are in arrear. This is only a just step towards those who paid their calls with ordinary promptitude. The present week is a holiday-making time amongst the lead miners, who are fond of keeping up the merry season of Christmas. The local share markets are dull, and nothing doing except in Mill Dam, Prince of Wales, and one or two railway stocks.

SCHOOL OF PRACTICAL GEOLOGY—PHYSIOLOGY.—Professor Huxley, F.R.S., delivered his concluding lecture on the above subject on Saturday last. He continued the consideration of the processes whereby the maintenance of the body is affected, and then went on to show how the waste matters are carried out of the system. Waste is induced by heat, growth, by muscular and mental exertion. The products arising from waste pass off by three channels; first, the respiratory organs; second, by perspiration; third, through the reinal canals. Carbon, in the form of carbonic acid, is got rid of by the respiratory action. Nitrogen is separated by the action of the kidney, while water, a considerable portion of carbonic acid, and a small portion of urea pass off by means of perspiration. He then addressed some remarks to show how this waste is restored in the body. This is performed by supplies from without, brought into the blood by absorption through the alimentary canal. The lecturer described the action of the stomach, small intestine, and the lacteals. The matters taken into the system as food are—first, those analogous in composition to protein; second, saccharine matters; and third, fats. He now dwelt at considerable length on reproduction, tracing the development of the germ-cell through its various stages, its protection by the amnion, and its attachment by the allantois to the placenta. In concluding, he remarked that probably at this period of the nation's mourning we may hear opinions of a peculiar tendency; but, he added, the laws of health and disease are not governed by a capricious interference, but by a covenant existing in the Divine mind through the long vista of ages.

JOINT STOCK COMPANIES LAW—WINDING-UP.—A case offering a fair example of the tenacity with which the officials of unsuccessful public companies will cling to the wreck, regardless alike of the interests of the shareholders and of the creditors, and apparently with the simple object in view of prolonging the company's miserable existence, in order that they may be enabled to continue to draw their salaries, was heard before the Master of the Rolls on Saturday, and, fortunately for the success of Joint Stock enterprise, was decided in favour of the contributories. In 1854, the Risca Colliery Company purchased certain mines of Mr. Russell for 130,000*l.*, of which 35,000*l.* remained unpaid at the time when the winding-up was commenced. The vendor took 80 shares in the company, which he settled upon his four children. Two calls, of 50*l.* and 75*l.* each respectively, had been made upon the contributories. The vendor now agreed to take 17,500*l.* in discharge of the balance of the purchase money, upon condition of his children not being put on the list of contributories. The official manager and the great body of shareholders approved the offer, but Mr. Hookey, the manager of the company, dissented. The question whether the compromise should be agreed to was adjourned from Chambers into Court. Now, as the manager of a company is usually regarded as a servant of the shareholders, it certainly seems strange that Mr. Hookey should be bold enough to instruct counsel in the attempt to prevent the wishes of his employers—the contributories—being carried out. Happily he has not been permitted to take such steps with impunity. In giving his decision, the Master of the Rolls said that two questions had been raised; first, the question of jurisdiction—whether he had power to assent to the compromise; and, secondly, whether, if he had power, it was a proper case for him to do so. He was clearly of opinion that he had jurisdiction in the matter. He was also clearly of opinion that it would be for the advantage of the contributories that the compromise should be carried out. It had been said that there were grounds for believing that the sale to the company could be set aside; but it is well known that there was no species of litigation more costly than attempts to set aside sales. Considering that the compromise, if carried out, would prevent a great deal of litigation, and would enable the official manager to dispose of the mine at once, and distribute the proceeds among the persons entitled, he was of opinion that it was one which the Court ought to approve, and he would sanction the compromise accordingly. The costs of all parties, except those of Mr. Hookey, to be paid out of the estate.

THE NATIONAL PROVIDENT INSTITUTION.—During a career of twenty-six years this institution has acquired a degree of prosperity that seldom attends any commercial undertaking, however favourable its auspices or operations. When it is stated that the National Provident Institution, after having paid upward of 1,100,000*l.* to the families or representatives of deceased members, possesses a capital of no less than 2,047,317, those by whom the undertaking was founded cannot but feel great satisfaction at having thus been the medium for the diffusion of such a great amount of benefit, and, at the same time, those who are now partaking of the manifold advantages which this institution offers doubtless congratulate themselves upon being associated with an enterprise so progressively satisfactory, while others of equal pretensions and with similar objects are now numbered among the things of the past. During the year the number of proposals have been 1054, of which 923 have been accepted and completed, the annual premiums upon which amount to 14,469*l.*, besides 1401*l.* in single premiums. The number of deaths have been 186, and the amount paid in course of payment on such claims is 121,839*l.* Ten policies, amounting to 7837*l.*, have become due and been paid to the members themselves. The balance of receipts over payments is 148,416*l.*, increasing the accumulated fund to upwards of 2,000,000*l.* The number of members is 13,528. These facts, so entirely satisfactory, show the large amount of public confidence that is deservedly reposed in this institution, and there can be no doubt that the same careful guiding hands that have brought it to its present condition will conduct it to a yet more successful position.

SALES OF COPPER ORES.

COPPER ORES SOLD AT THE CORNWALL TICKETINGS, FOR THE QUARTER ENDING DEC. 31, 1861.

Mines.	Tons.	Total.
Devon Great Consols	6259	£31,553 9 6
Clifford Amalgamated	3315	18,930 12 6
South Caradon	1325	13,103 4 0
West Seton	1764	11,778 19 6
Phœnix	1546	9,430 17 6
West Basset	1482	8,030 17 0
Fowey Consols	1320	7,631 7 0
Par Consols	825	6,926 14 6
Great Wheal Busy	2103	6,415 11 6
East Caradon	965	6,325 15 0
Wheal Basset	818	6,241 6 0
Marke Valley	1158	5,460 7 6
West Caradon	497	4,693 7 0
Great Wheal Alfred	1082	4,598 14 0
South Frances	642	4,334 3 0
South Tolgus	576	4,282 12 6
Wheal Seton	791	4,131 18 6
Carn Brea	1055	3,991 6 0
Wheal Crelake	712	3,871 15 6
East Pool	875	3,656 15 6
East Basset	428	3,456 5 6
Rosewarne United	356	3,382 11 0
Craddock Moor	409	3,244 6 6
Wheal Friendship	390	3,237 3 6
Great South Tolgus	367	3,095 13 0
Bedford United	624	3,032 6 6
Tywarnhaile	798	2,746 1 0
Tincroft	769	2,731 8 6
West Damsel	590	2,649 18 0
North Robert	381	2,487 14 0
Copper Hill	396	2,455 17 0
Charlotte United	285	2,337 6 6
Condurrow	579	2,295 3 0
Great Wheal Martha	936	2,152 0 0
North Treskerby	331	2,046 8 0
North Downs	266	2,002 9 0
East Crinnis and South Par	330	1,972 14 0
Hingston Down	340	1,958 4 6
Sortridge Consols	217	1,875 11 6
Wheal Edward	527	1,857 0 6
Treloweth	209	1,833 2 0
Wheal Buller	340	1,801 3 0
Levant	287	1,743 18 0
South Crinnis	354	1,699 4 0
East Carn Brea	263	1,646 5 6
North Roskear	211	1,608 6 0
Wheal Emma	452	1,539 11 0
Alfred Consols	257	1,496 13 6
East Russell	229	1,450 15 0
Pendeen Consols	437	1,446 13 0
Holmbush	287	1,264 14 0
Botallack	138	1,181 10 0
Wheal Margery	218	1,149 17 0
Stray Park	221	1,148 18 0
Camborne Vean	222	1,051 15 6
North Grambler	142	1,017 1 6
Okel Tor	306	974 5 0
Wheal Polmear	135	938 19 6
Gonamena	173	869 5 6
Collacombe	128	821 16 0
Brookwood	145	818 6 6
Dolcoath	173	688 12 0
Wheal Agar	82	671 2 6
East Rosewarne	82	631 19 0
Calstock Consols	159	605 16 6
Tolvadden	116	601 9 0
New Treleigh	135	610 8 0
St. Day United	180	622 3 0
East Wheal Alfred	123	593 9 6
Fursdon	85	582 13 0
West Tolgus	107	580 14 0
Hawkmoor	110	527 4 6
North Basset	105	501 13 0
Wheal Anna	166	561 15 6
Kelly Bray	167	499 13 6
Yarner	154	499 6 6
Treworlas	94	495 17 0
Grambler and St. Aubyn	64	487 16 6
West Stray Park	59	472 0 0
Lady Bertha	197	471 17 6
Wheal Unity	99	448 11 0
Feock Regulus	65	440 2 6
Tolcarne	85	442 15 0
South Crofty	118	439 9 0
West Fowey Consols	52	436 16 0
Wheal Arthur	110	435 5 0
North Crofty	102	356 16 0
West Trevelyan	42	337 16 0
Cuddra	143	333 13 6
Trevoole	81	322 4 0
South Dolcoath	17	317 16 0
South Bedford	100	275 10 6
Carn Camborne	43	259 5 0
South Crenver	61	239 14 6
Great Brigan	44	234 6 0
Wheal Harriett	34	232 18 0
Devon and Cornwall	100	218 15 0
Perran	66	214 13 0
Wheal Grenville	21	211 12 6
East Tolgus	39	190 1 6
New Wheal Hendre	22	182 1 0
Wheal Franco	57	180 19 6
Prideaux Wood	70	175 10 0
North Wheal Busy	15	172 16 0
South Phœnix	15	169 2 6
Tresavean	65	168 11 6
Boscaswell Downs	12	168 6 0
New Cornish Company	64	164 16 0
Great Crinnis	36	164 14 0
West Alfred	58	155 15 0
Rosewarne Consols	40	150 4 0
Pedn-an-drea	23	147 12 6
Creegbrawse	29	144 19 0
Camborne Consols	22	139 12 0
Crane	14	136 10 0
Wheal Hearle	10	135 1 6
Mines Royal Ore	28	128 14 6
East Grenville	27	125 11 0
South Basset	38	123 10 0
Visick's Precipitate	3	121 2 6
Gurlyn	14	114 9 0
Wheal Kitty	14	110 12 0
East Charlotte	31	95 0 0
West Providence	10	85 10 0
Duchy and Peru	45	83 9 6
Castle and Boswidden	3	78 8 6
South Carn Brea	18	78 6 0
Old Tolgus	12	78 0 0
West Tolcarne	12	77 14 0
Trenouth	40	77 5 0
Clijah and Wentworth	18	73 7 0
Wheal Cupid	17	70 6 6
Nangles	10	66 0 0
Trehill	25	56 5 0
Great Tregune	7	54 5 0
Wheal Crowndale	20	54 0 0
Falmouth and Sperries	16	53 4 0
Cook's Kitchen	44	51 14 0
Wheal Ellen	25	49 3 0
Hender's Ore	20	39 0 0
Wasley's Precipitate	1	36 6 6
Furze Park	9	35 6 6
Goonzion	4	35 6 0
New South Ellen	6	31 7 0
Harvey's Ore	16	30 16 0
Wheal Grylls	7	26 5 0
Wheal Mary	6	23 8 0
Brown's ore	6	17 2 0
Wheal Prosper	12	14 14 0
Wheal Wrey Consols	1	8 5 0
Total		£265,513 9 3

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Vivian and Sons	6960	£36,541 14 7
Freeman and Co.	3499	21,877 16 6
P. Grenfell and Sons	4053	28,398 12 7
Crown Copper Company	1282	6,166 5 9
Sims, Willyams, Nevill, and Co.	5234	23,512 2 4
Williams, Foster, and Co.	7424	48,631 10 4
Mason and Elkington	6653	38,416 6 8
F. Bankart	2319	11,108 16 10
Copper Miners' Company	5042	29,471 15 6
C. Lambert	3864	13,893 14 9
Newton, Keates, and Co.	364	2,107 14 8
Alkali Company	41	19 8 8
Sweetland, Tuttle, and Co.	1849	5,367 10 1
Total	48,493	£265,513 9 3

TINSLEY MAIN COLLIERY.—Messrs. Bailey, of East Retford, have recently erected works for lighting this colliery with gas, being the latest of the many improvements introduced by Mr. Chambers, the overlooker, since he took office. The pits are now in excellent state of working—the discipline is good; the ventilation as near as may be perfect, 35,000 cubic feet of air passing into the pits every minute; and safety-lamps are exclusively used.

SALES OF COPPER ORES.

COPPER ORE SOLD AT THE SWANSEA TICKETINGS, FOR THE QUARTER ENDING DECEMBER 30, 1861.

Mines.	Tons.	Amount.
BRITISH.		
Knockmahon	2157	£22,065 11 0
Berehaven	2012	20,478 8 0
Lochwinnoch	247	1,372 19 6
Bristol Regulus	32	1,157 12 6
Laxey	221	1,107 11 6
Ballycummisk	124	1,024 2 0
Connorree Precipitate	9	364 10 0
West Kalme	47	279 18 0
Scull Bay	27	247 10 0
Cronebane	3	63 15 0
Tigrony	3	63 15 0
Holyford	5	39 5 0
Smith's Ore	22	30 16 0
Phœnix	1	9 11 0
Total	4910	£48,305 4 6
COLONIAL.		
Wheal Maria	68	£ 1,672 15 0
Ookip	96	3,021 17 0
Australian	29	1,417 1 0
New South Wales	4	59 2 0
Total	197	£ 6,170 15 0
FOREIGN.		
Cobre	2908	£41,475 0 0
Cuba	764	10,048 7 6
Del Soto	98	2,045 11 6
Sestri	122	1,631 11 6
Valencia	67	1,563 0 6
Genoa	54	851 19 0
Almeria	57	821 10 6
French	134	797 6 0
Turkish	32	445 17 0
Seville	40	388 9 0
Italian	81	320 14 0
Norway	2	35 3 0
Swedish	1	5 0 0
Total	4360	£60,429 9 6
RECAPITULATION.		
British	4910	£48,305 4 6
Colonial	197	6,170 15 0
Foreign	4360	60,429 9 6
Total	9467	£114,905 9 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Copper Miners' Company	1002	£14,717 3 3
Freeman and Co.	1011½	11,721 16 0
P. Grenfell and Sons	1203	14,529 6 6
Sims, Willyams, and Co.	555	10,257 17 6
Vivian and Sons	2028½	21,776 0 6
Williams, Foster, and Co.	2398	28,018 3 9
Mines Royal Company	156	1,873 14 0
Mason and Elkington	222	3,017 8 6
F. Bankhart	656	7,017 0 6
Charles Lambert	90	410 19 0
Sweetland, Tuttle, and Co.	145	1,565 19 6
Total	9467	£114,905 9 0

CLARA SILVER LEAD MINING COMPANY.

A petition was presented to the Court of Bankrupicy, on Tuesday last, by the liquidators of this company, praying that the voluntary winding-up may be continued under the supervision of the Court.

It appeared that this company was incorporated in Feb., 1857, under the provisions of the Joint Stock Companies Act, 1856, with a capital of 8000*l.*, divided into 2000 shares; that the whole of the capital was subscribed for, and, with the exception of a small sum, expended in the prosecution of the objects of the company. At a special meeting, held in July, it was unanimously resolved that the affairs of the company should be forthwith wound-up voluntarily, the present petitioners being appointed liquidators. That resolution having been confirmed at a subsequent special meeting, the property, materials, &c., were in due course taken possession of, and realised by the liquidators, the realisation producing 151*l.*, which, with the addition of 20*l.*, constitute the assets available for distribution among the creditors. The aggregate indebtedness of the company is about 600*l.* Several writs have been served for the recovery of small amounts, the aggregate claims of which did not exceed 90*l.*, and legal proceedings have been threatened at the instance of other small creditors. The liquidators were ready to distribute the assets in their hands among the several creditors who have proved their claims, but were advised that in consequence of proceedings and threats they could not safely proceed to any such distribution. Under these circumstances, the petitioners believed it would be greatly to the advantage of all parties interested that the affairs of the company should be wound-up under the order or supervision of the Court. The petition was heard before Mr. Commissioner Goulburn.

Mr. DORIA (instructed by Mr. Marsden, of Walbrook) appeared in support of the petition. He stated that the petition simply prayed that the winding-up of the affairs of the company might be continued under the supervision of the Court, according to the provisions of the Act (21 and 22 Victoria, sec. 2, chap. 60). The petition having been presented, Mr. Commissioner Evans had granted an injunction staying all actions brought against the company until this day, which was appointed for the hearing. All the assets of the company had been realised, except about 20*l.*

The COMMISSIONER said it appeared to him that the only object of the petition was to give the Court jurisdiction, that the liquidators might come to the Court, if necessary, to stay actions.

Mr. DORIA said the petition stated that, with the exception of about 20*l.*, all the assets of the company had been realised; and the petitioners, therefore, prayed that the liquidation might be continued under the supervision of the Court, in order that they might have the protection of the Court, if necessary.

The COMMISSIONER enquired if notice of the petition had been served upon the copartners, who ought to show cause?—Mr. DORIA replied in the affirmative, both of the petition and injunction. The petition prayed that the injunction might be continued—that was the usual prayer in a Bill of Chancery.

The COMMISSIONER could not see, without hearing the parties on the other side, that he could make the rule *nisi* for an injunction absolute.

Mr. BALDEN, representing the creditors, had, of course, no objection to the application that the winding-up should be continued under the jurisdiction of the Court.

The COMMISSIONER said the auditors had a right to enquire as to the propriety of the proceedings taken by the liquidators, but that must be an application in itself hereafter.

After some further discussion, the Commissioner made an order that the voluntary winding-up should continue subject to the supervision of the Court, and that all suits and actions should be stayed.

TRUTH'S ECHOES; OR SAYINGS AND DOINGS IN MINING.

The general suspension of business during the week, occasioned by the funeral of the lamented Prince Consort on Monday, and the subsequent Christmas holidays, have affected the Mining Share Market considerably; consequently, the operations of the other few days have been of a very limited character indeed. The shares which have been chiefly dealt in may be enumerated in a short list:—EAST CARADON shares have had a very active market, and at advanced prices, in consequence of the intersection of a new lode in the 60 cross-cut south.——MARKE VALLEY shares have been in good request.——SOUTH CARADON and WEST CARADON shares have receded in price, and are more freely offered.——TRELAWNY and MARY ANN shares continue in fair demand, at market quotations.——SETON shares have fluctuated in price, although several transactions have taken place, in consequence of the improved prospects of the mine.——EAST CARN BREA shares have been freely sought for, at improved rates, from reported improvements.——Cook's KITCHEN and SOUTH TOLGUS shares have been much enquired after, at higher figures.——NORTH ROSKEAR and NORTH DOWNS have been dealt in at firmer rates.——GRAMBLER and ST. AUBYN shares have changed hands, at better prices.——SOUTH FRANCES shares are sought for at improved rates, but found rather scarce at buyers' prices.——CONDURROW and CLIFFORD AMALGAMATED shares have found buyers at present quotations.——WHEAL GRYLLS shares continue in fair demand.——SORTRIDGE shares show a tendency to improve, and several transactions have been effected at improved rates.——NORTH ROBERT and LADY BERTHA shares continue dull, and the business done has been at lower prices.——EAST WHEAL RUSSELL shares have been in request, at present prices.——HINGSTON DOWN and WHEAL EDWARD shares are rather heavy, although the mines look well.

EAST CARADON.—By letters received on Monday, I was advised that on Saturday last, in driving the 60 cross-cut south, they had intersected another lode, and had cut into it about 18 in., and found it worth from 20*l.* to 30*l.* per fm.; the caunter lode in the 50 east was worth full 100*l.* per fm., the 60 east 50*l.* per fm., and Fawcett's lode, in the same level, 12*l.* Another correspondent writes on the 25th:—"The discovery in the 60 cross-cut is most valuable and important, and, as far as seen, is worth from 25*l.* to 30*l.* per fm.; it is a splendid lode, and, like the caunter, inclines a little north, consequently at the deeper levels will be nearer the shaft, and give a longer length on its course. The 50 east is still worth 120*l.* per fm., and all other places are looking well." From a report received this morning, I am advised that the new lode has been cut through, and is worth full 30*l.* per fm. The 50 east is not quite so good; but every other place is of the same value as before reported.

At WEST SHARP TOR operations in the 162 are suspended for the present; the 150, east and west, holds out considerable promise, and looking daily for an improvement, in the eastern level especially. The lode generally is greatly improved.

GREAT TREGUNE continues to look very encouraging indeed. At the 80, both east and west, the lode is large, and yielding excellent saving work, and from its improved appearance an early and important discovery is fully expected. Other productive places are looking equally good.

GUNNIS LAKE MINE (Clitter's) account was held on Saturday last, at Tavistock. The statement of accounts have not yet been received, nor have I received the amount of dividend declared, which from the profits made is expected to be very good.

WHEAL ANNE (near St. Austell).—A special general meeting was held on Monday last, when the reports of Captain H. B. Grose, the agent, and Captain R. Hancock, of Great Polgooth, were read and adopted. It was resolved to carry out the operations recommended with vigour, especially the driving of the deep adit to the south lode, and developing the great lode west, when it is fully expected to secure profitable results, considerable workings having been carried on in the backs of the latter lodes, and large quantities of tin returned.

WHEAL SETON is reported to have improved in the 140, or bottom level. The sale next week of 179 tons is an improvement of 59 tons on the former, or corresponding small sale; as there is no tributers' ore put in, the next will be considerably larger, and this intimation is given as it shows an apparent falling off in the returns, when, in fact, it is a very considerable improvement.——EAST CARN BREA continues to look well in every productive place; they sampled on Tuesday, the 24th, 345 tons of copper ore; a very large portion having been taken from the ends in course of driving, or the winze open-

ing for ventilation.—SOUTH CARN BREA is represented to be looking remarkably promising for a great and permanent tin mine; they sold on the 21st, 7 tons 17 cwts. 2 qrs. 14 lbs. of black tin, realising 526*l.* 1s. 5d.

CARNYORTH quarterly account, held on the 16th, showed a loss of 303*l.* 7s. 9d. for that period, increasing the debit balance to 1271*l.* 8s. 2d. A call of 5s. per share was made.

JAMES LANE.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

WHEAL MARTHA sold in the last month upwards of 1200 tons of ore. A piece of ground is working adjoining, called Martha Consols, close to Wheal Martha boundary, and between East Martha and Wheal Martha: it is not a large sett, but most important, as Martha lode is valued at 30*l.* per fm. at the 10; this piece of ground can be worked dry, and would have been a great acquisition to Wheal Martha.

DEVON BULLER is still looking well. A large engine is to be at once erected, and it is expected that ore enough will be raised to pay for it. The lode is very large, and producing fine black ore, and it may be fully expected that this will be one of the 1862 "trumps." The Buller family are large shareholders.

MARTHA CONSOLS.—This sett is situated direct east and adjoins Great Wheal Martha on the continuation of the same lode and in the same course of ore, on lands belonging to Mrs. Bremmicombe, which is granted to a local company at a royalty of 1-15th dues. The company is making every preparation to inchoate the mine in a spirited manner, being satisfied of its intrinsic value. The fact of this large and porous lode being within a few fathoms of the workings in Great Wheal Martha at the shallow levels, where the water is perfectly drained to the bottom of the mine, is a sufficient guarantee that the property can be worked to a considerable depth, and thousands of tons of ore raised and made marketable without the aid of expensive machinery.

POLHIGEY MOOR.—This new mine is opening very satisfactorily: good piles of tinstuff are being raised, and it is expected the mine will quickly pay costs.

FOWEY AND PAR UNITED MINES.—During the last few days I have visited these mines, and was pleased to find erected a first-class 36-in. pumping-engine, with rotary work attached, for stamping as soon as required. The engine-shaft has been sunk about 13 fms. below the adit level. In sinking the said shaft they have met with some large branches, or leaders, producing tin, which at no great depth will form a junction with the lode. From the many lodes in the sett, which have a first-class appearance, I am of opinion that it is only necessary for them to get to a deeper level to develope the lodes, when the proprietors will be fully remunerated for their perseverance and outlay. Everything appears to be carried on in a very economical and substantial manner.—Wheal Par: I cannot pass the same compliment on this mine as at Fowey and Par. They are endeavouring to clear an adit in decomposed granite, which, no doubt, they will find very expensive; and they have 130 to 140 fms. more to reach the workings of the ancients. I am of opinion that if the proprietors were to erect a suitable engine on the mine they would come on the desired point at once, when, I have no doubt, they would soon raise tin, as much work has been done by the ancients. Should they clear the adit they will eventually require all their water to be raised to surface for dressing and other purposes. I have a high opinion of the mine, if properly carried out.

ST. JUST UNITED TIN AND COPPER MINES.—We are glad to learn that the shares in this company have been eagerly subscribed for, and that the list for applications will be shortly closed. Many highly-respectable firms from the country have applied for shares; this is a good index of the opinion entertained by persons well able to judge as to the value of the property; but its well-known applicants have been numerous for this sett, which until recently could not be obtained. All the old miners in the district are in high glee to hear that these mines are likely to go to work again. We have ascertained that the engine is purchased, and that operations will be commenced on January 1; that Capt. Carthew has given his word that returns will be made as soon as the engine is at work and the mine in fork, which will be by the end of next March.

GREAT CRINNIS.—The second boiler has been repaired and set to work, and the engine is now in excellent working order. The lode in the 100 is still very large, and producing some rich copper ore.

FURSDON has sampled 36 tons of ore, 18 tons producing 3¼ and the remainder 6¾. This mine has made a profit of upwards of 50*l.* per month for the last four months, and should the ore be found in the 21, as indications lead them to expect, the profits will be increased and continued for a considerable period.

Meetings of Mining Companies.

GREAT WHEAL BUSY UNITED MINING COMPANY.

An ordinary general meeting of proprietors was held at the company's offices, Austin-friars, on Monday, Mr. PINNINGTON in the chair.

Mr. EDWARD KING (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed. A statement of accounts for the three months ending Oct. was then submitted, from which the following is condensed:—

Aug. mine cost, merchants' bills, &c.	£3420 15 8		
Sept. ditto	2916 9 4		
Oct. ditto	3032 10 4	£9369 15 4	
Balance last audit	£ 284 13 7		
Copper ore sold	6297 13 4		
Tin sold	2520 15 5	9103 2 4	
Balance (debit)		£ 266 13 0	

The report of the agents was read, as follows:—

Dec. 21.—In the 120, at the engine-shaft, we cannot report upon the value of the lode; in the 120, east of Offord's, there is a very promising lode. In the 110, east of Offord's, the lode is worth for tin and copper 10 tons of ore per fathom—very tinny. In the 100, east of Offord's, the lode is worth 15 tons per fm. In the 90, east of Mathew's, the lode is worth for tin 50*l.* per fm. In the 80, east of Mathew's winze, the lode is tinny. In the 80, east of Mathew's end, the lode is poor. In the 70, east of Mathew's, the lode is yielding low price tin and copper ore. In the 50, east of Mathew's, the lode is yielding low price stuff. In the 120, west of engine-shaft, the lode is poor. In the 100, west of Fielding's, the lode is yielding a little tin. In the 90, west of Fielding's, the stope is yielding low price stuff. In the 80, north of Tcking's, we have not holed as yet. In the 70, north of Toking's, no lode as yet ground good. In the 100, east of Offord's, in No. 1 winze, the lode is yielding 15 tons of tin and copper per fm. In the 100, east of Offord's, in No. 2 winze, the lode is worth 10 tons per fm. In the 100, east of Offord's, in Worley's winze, the lode is worth 15 tons per fm. In the 90, east of Offord's, in Levett's winze, the lode is worth 18 tons per fm. In the 90, east of Offord's, in Kitelee's winze, the lode is worth 16 tons per fm. In the 90, sinking at Mathews's, the lode is worth 12 tons per fathom, and daily improving. In the 98 stope, at Mathew's, the lode is worth 12 tons per fm. In the 90, west of Rowland's, Moyle's bottom, the lode is worth 12 tons per fm. We purpose in the coming quarter to continue our former operations, and sink the engine-shaft towards the 130 by twelve men, with all dispatch. In the engine-shaft we have fixed at the 120 a 17-inch plunger, secured the engine-shaft, put in an angle-bob at the 95, also a balance-bob at the surface to Harvey's engine, secured and put down skip-road in Mathews's shaft, from the 80 to the 90, and are now securing and putting down skip-road in Fielding's shaft, from the 110 to the 120. At Boscawen's we have drained the mine to the 26, fixed an 18-inch plunger, and are now in readiness to drop the lift to the 40. We have built the steam-whim engine-house, and put in the engine, steam capstan, and whim; we have also cleared and secured Kitelee's whim-shaft from the adit to the 26. We have cut down and secured Hunter's flat-rod shaft to about the shallow adit; also the same shaft from the adit to the 26, and put in ladder-ways from surface to the 26; at this part of the mine we purpose driving with all speed. During the past quarter we have had new plant to the value of 744*l.* 12s. 1d., and expended in labour, in fixing the same, 232*l.*, making an amount of 976*l.* 12s. 1d. This sum is charged in the present balance-sheet. We consider our machinery and pitwork are in good order, which will enable us to sink Harvey's engine-shaft to a great depth. We calculate our returns for the coming quarter will be about the same as the past.—J. DELBRIDGE, J. PETHERICK, E. RICHARDS, J. BRYANT, R. GILES.

The CHAIRMAN thought the report just read contained so fully the various points to which it would otherwise have been his duty to have called the attention of proprietors, that he need not trouble them with any observations, further than to remind his co-adventurers that Great Wheal Busy had made a profit of 630*l.*, after an expenditure of 976*l.* had been charged for new plant, so that there had been during the quarter an actual profit upon Great Wheal Busy operations of nearly 1600*l.*, or an average monthly profit of about 530*l.* It was satisfactory to find that the produce of the ore had improved.

The SECRETARY said that a letter had been received from the manager, which stated they had a fine lode for tin at the bottom of the shaft, now being sunk to the 130, and that from the character of the lode the manager thought it would soon become of great value. At the 110 they had a fine lode for copper, but thickly impregnated with tin—this was a most important point in the mine, as the 100 was in a good lode. At the present time the 100 east was producing from 15 to 18 tons of copper ore per fm. The 90 was now worth for tin from 50*l.* to 60*l.* per fm.; and looking at the winze at the 80—which was between 15 to 16 fms. in advance of the 90 end—the manager thought that a discovery might be any day made at this point. The 120 east was likewise looking better—in fact, at no period during the present operations had the prospects generally presented an appearance so favourable.

Mr. KITELEE stated that a party had at various times endeavoured to prejudice him against Great Wheal Busy; but before he (Mr. Kitelee) purchased an interest in the undertaking he thoroughly examined into the whole of the geological and commercial details of the undertaking, as also its antecedents. And all he could say was, especially now that operations had been resumed at the adjoining mines, it was his firm impression that in the course of a few months Great Wheal Busy would prove to be a dividend-paying property. They must remember that in the eastern part of Great Wheal Busy alone some fine courses of ore had been discovered in the 90 and 100; and in the 110 there could be no doubt the same result would be secured—in fact, he believed that Great Wheal Busy would yet return as much ore as any mine in the county of Cornwall. He was glad to find by the last sale that the produce of the ore was improving, and if they could only get the tin more separated from the copper the value of the ore would be still further greatly increased.

The SECRETARY said that since the last meeting he had purchased the Great North Downs Mine, an interest in which, as they were aware, had been offered to the proprietors in Great Wheal Busy. He was glad to say that the 6000 shares had been taken up, and that the engine had been set to work, and had drained nearly 10 fms. The Brigan engine was also at work, so that the district was being drained by four pumping-engines, the whole of which work had hitherto been performed by the two engines at the Great Wheal Busy. He need not remind the meeting that this was a matter of the utmost importance to the future profit of Great Wheal Busy.

A SHAREHOLDER stated that he understood Lord Falmouth's toller had spoken very favourably of the general prospects of the mines—indeed, it was said that Lord Falmouth looked forward confidently to the time when he should be deriving from Great Wheal Busy an income from the dues of 10,000*l.* per annum.

The CHAIRMAN said when upon the mine some three or four weeks since, he interrogated their manager (Capt. Delbridge) as to the reserves, thinking it probable that, as the sales of ore had lately been increasing in quantity, the reserves might have been diminished. But he ascertained from Captain Delbridge that the reserves had not been decreased, and that the ore was certainly of a better quality, especially that from the deeper levels. As regarded the facts referred to by Mr. King in connection with the neighbouring properties, everyone who knew anything of the district must see at once the great importance, especially to Wheal Busy, of having the water charges divided among four mines.

Mr. KITELEE thought Great Wheal Busy was now just being brought into that position which such a mine should at all times occupy. Without making any invidious allusion, he might say that the mine had never before been developed upon such fair and miner-like principles. The former workers kept making large returns, and leaving nothing behind them in the shape of reserves, save a few pitches which contained very little ore. It was his opinion they would not discover anything of great importance till the 80 or 90 fm. level was reached.

The CHAIRMAN, endorsing the opinion of Mr. Kitelee, said there was great credit due to Capt. Delbridge for the energetic and miner-like way in which the operations of the mine had been conducted since his appointment as manager. It was not more than 18 months since that the question of finding ore below the 100 was discussed at a committee meeting, at which several eminent mining captains were present. Upon that occasion Capt. Delbridge was the only one who contended that ore would be discovered in depth. Since then they had discovered ore in the 110, and every indication justified the belief that all the anticipations of Capt. Delbridge would be realised.

A SHAREHOLDER said they were greatly indebted to Capt. Delbridge, for there was no doubt if the committee had not made an alteration in the management the mine never would have been brought into its present favourable position.

The CHAIRMAN said there could be no doubt that in Great Wheal Busy they had a most valuable property, which fact would soon be made apparent. For the past two years the committee had been labouring to bring about the state of things which now existed with regard to the adjoining properties, and he thought there could be no doubt that their most sanguine expectations would be realised.

The report and accounts were then unanimously received and adopted, and the committee of management were re-appointed. A vote of thanks to the Chairman was passed, when the proceedings terminated.

CROOKHAVEN MINING COMPANY.

The second annual general meeting of proprietors was held at the company's offices, Bridge-street, Blackfriars, on Monday,—Colonel BUSH in the chair.

The notice convening the meeting having been read,

Mr. J. WRIGHT (general manager) submitted the report of the directors, which stated that, reasoning from the analogy of the various mines in the district, the lodes only proving continuously valuable in depth, the directors during the past eight months had discontinued all other operations save those connected with deep sinking. Hitherto, owing to the difficulties of ventilation, the successful sinking of the main shaft had not progressed at all in conformity with their wishes; during the last three month, however, the difficulty had been completely overcome, and the sinking was now going on in a most rapid and successful manner. It was believed that in a few months they would arrive at a point which would completely test the value of the mines, and, as they hoped, prove it equal to the most valuable in the district. Several persons well acquainted with the locality recommend that a new trial shaft should be sunk to the west of the present one at a point where it was thought there was a great probability of finding the lode valuable—that had been carried down nearly 20 fms., and a cross-cut now being driven to intersect the lode; the board were daily expecting to hear that this was effected. They had also directed that a winze should be sunk on the south lode in the 40 fm. level; here, the board were glad to say, the results were fully realising their anticipations, for already, although only 3 fms. were sunk, the indications were of the most favourable kind, every foot sunk proving the increased value of the lode, and they believed that when a few more fathoms were attained they would have a permanent and paying result

A cash account made up to November showed a credit balance of 64*l.* 13s.; and a statement of assets and liabilities showed a balance in favour of the mine of 942*l.* 6s. 2d. The amount of capital called up was 6169*l.*, leaving 983*l.* uncalled.

The CHAIRMAN, having moved the adoption of the report and accounts, stated that the measures which had been adopted since the meeting in April last, in order to develope and realise the great source of wealth which the directors believed the mine possessed, were so amply detailed in the report of the directors just submitted that he need only say the confidence of the board in the permanent success of the Crookhaven Mine continued undiminished. But their general manager (Mr. Wright) was present, who was fully acquainted with the whole of the details, both practically and commercially, and he would be glad to afford proprietors any additional information they might wish for.

Mr. Moss enquired what progress had been made in the development of the property during the past eight months?

Mr. WRIGHT replied that, after due consideration, and as the report stated "reasoning from the analogy of the various mines in the district," the board had suspended the further development of the various operations, save the sinking of the main shaft and the trial shaft, by which the whole of the property would be proved, and the directors believed such results secured as would not cause any proprietor to regret having become associated with the undertaking.

A PROPRIETOR enquired the value of the ore sold?—Mr. WRIGHT replied that the ore sold had realised 134*l.*

Mr. Moss enquired if there was any ore being raised from the mine at the present time?—Mr. WRIGHT replied that they were not at present raising ore, the directors believing it better to concentrate the whole of their efforts upon the proving of the mine by further sinking the shaft.

In answer to further questions as to the length of time it would occupy to sink the shaft to a sufficient depth to satisfactorily prove the mine, Mr. WRIGHT explained by means of a plan that the stratum on one side of the bay dipped towards the north, while on the other side it dipped towards the south; but the inference of all the engineers and others who had examined the property, was that the strata were converging, and that that the point at which they would be found to converge would be at or about the 70. At the present time the depth attained was 55 fms., and from the progress now being made he thought they might calculate upon reaching the 70 fm. level in about five or six months.

A report of Mr. Lisabe was then read, which advised the vigorous sinking of the main shaft.—The report and accounts were then unanimously received and adopted.

Some discussion then ensued upon the subject of the arrears of call, the CHAIRMAN stating that the parties in arrears of call had been communicated with, and the board only awaited the instructions of the shareholders to adopt the recommendations of the company's solicitor to take legal steps to recover them, when it was resolved that the manager be instructed to send a notice to all persons in arrears of call, that unless the arrears be paid within 14 days of the date of the notice such shares would be liable to forfeiture; and it was further resolved that the directors be instructed to absolutely forfeit all shares upon which the arrears were not paid by the time specified, and the solicitor to take proceedings to recover the arrears.

The whole of the directors having retired from office, a resolution was passed reducing the number to five, when Col. Bush, Messrs. T. C. Smith, T. Hungerford, C. Hawkins, and G. Searby, were unanimously re-elected.

The CHAIRMAN having, on behalf of himself and his colleagues, acknowledged the compliment, stated that Mr. Hungerford was about to return to Ireland, to take up his residence near the Crookhaven Mine, and the directors believing considerable advantage would accrue from his supervision of the operations, had succeeded in securing his services as superintending and managing director.

Mr. WRIGHT, in answer to a question, replied that the board up to the present time were certainly not at all satisfied with their managing captain.

A vote of thanks to the Chairman was then passed, when the proceedings terminated.

EAST INDIA COAL COMPANY.

A special meeting of proprietors was held at the London Tavern, yesterday,

Mr. H. HAYMEN in the chair.

The notice convening the meeting having been read,

The CHAIRMAN said the present meeting had been convened for the purpose of confirming the special resolutions passed at an extraordinary general meeting, held on Sept. 30, and in the event of such resolutions being confirmed, to appoint additional directors. Before, however, proceeding to the immediate object for which the meeting was called, he might, perhaps, state that the railway would be completed at the end of the present year, and that Dr. Macrae, who was a large shareholder, had gone out to Calcutta with the determination to do everything he could to make the company a prosperous undertaking. As regarded the quantity of coal being raised, that had been slightly increased; and, so far as they could possibly judge, they had every reason to believe the company would be very materially benefitted by the opening of the railway. He might also state that up to the present time the verified accounts had not been received from the other side, but, in accordance with the pledge given on the part of the directors at the last meeting, the proprietors would be called together as soon as possible after the reception of those accounts, should they be received before the time of holding the ordinary annual meeting.

Mr. MACKAY enquired if the works had been injured by the heavy rains. He was induced to ask that question from the fact that in the indigo districts considerable damage had been sustained.

General DOWNING did not believe any damage had been done to the company's works. During the period of heavy rains they might not, perhaps, be able to raise quite so much coal as during the dry seasons, but that was the only inconvenience that, he believed, had been occasioned by the rains.

Mr. BROWN thought some remissness had taken place on the other side, and he hoped the directors had not failed to communicate their opinion upon that point.

The CHAIRMAN said the board had written some strong letters to the present committee; but, until those accounts had been made up quite to the satisfaction of the board, proprietors might feel assured they would not be submitted. Certain explanations were required, and until those explanations were made, and the official accountants were satisfied with regard to the profit and loss accounts, the board would not place any accounts before the proprietors.

The special resolutions were then read, which were to the effect that the maximum number of directors should not exceed twelve, of which number five should be persons generally resident in Bengal.

The question being put, the resolutions were unanimously confirmed—when Dr. Macrae, Messrs. Lyall, and D. C. Mackey, were elected the directors in India, with power to elect two others.

The CHAIRMAN said that concluded the business of the meeting; and, thanking the proprietors for their attendance, he hoped their company would be brought into a position somewhat analogous to the Bengal Coal Company. The board felt much indebted to the proprietors for the kind manner in which they had supported the directors in the emergency in which they had been placed with reference to the accounts, and they trusted when they next came before them a satisfactory account would be presented. He could not hold out any hope—at least, such was his individual opinion—that a dividend had been earned upon the operations of the past year; but, at the same time, his opinion might prove to be wrong. They had reduced every item of expense to its lowest minimum, and they would do all they possibly could to bring the company into a permanently dividend-paying condition.

General DOWNING said he had been much encouraged by the accounts received from India, but he had always entertained an opinion that if the property were properly managed successful results must be secured.

A unanimous vote of thanks to the Chairman was then passed, when the proceedings terminated.

FOREIGN MINES.

LUSITANIAN.—Dec. 14: Palhal Mine: Basto's Lode: At Taylor's shaft we still continue sinking below the 60, the lode is left standing for the present. In the 60, east of Taylor's shaft, the lode is worth 3 tons per fm. In the same level, west of this shaft, the lode is worth 2 tons per fm. In the 50 west the lode is worth 1 ton per fm. In the 38 west the lode is also worth 1 ton per fm. In the 8, east of Perez' shaft, the lode is unproductive; the same level, west of Abel's winze, is also unproductive. In the adit, west of Perez' shaft, the lode has become small, and appears to be hove away to the south, and is only producing stones of ore. The lode in Joaquim's winze, below the 50, is worth ½ ton per fm. The stopes No. 1, above the 50, are worth 1 ton per fathom. The lode in the stope No. 2, above the 38, west of Clondino's winze, is worth 2 tons per fm. In the stopes No. 4, in the bottom of the 28, west of Clondino's winze, the lode is worth 1 ton per fathom. In the stopes No. 5, above the 38, east of Clondino's winze, the lode is worth 1 ton per fm. In the stopes No. 6, above the 50, east of Jackson's winze, the lode is worth 1 ton per fm. In the stopes No. 9, above the adit, west of Perez' shaft, the lode is worth 1 ton per fm.—Mill Lode: In the 50, west of river shaft, the lode is worth ½ ton per fm. In the 38, east of Taylor's, the lode is worth 1 ton per fm. In the stopes No. 10, above the 18, east of Dea's winze, the lode is worth 1 ton per fm. In the stopes No. 11, above the 38, west of the caunter lode, the lode is worth 1¼ ton per fm. In the stopes No. 14, above the 50, west of river shaft, the lode is worth 1 ton per fm. In the stopes No. 15, above the 38, east of Roderigue's winze, the lode is worth 2 tons per fm.—Caunter Lode: In the 38, west of the mill lode, the lode is producing stones of lead and copper ore. In the 50, west of Taylor's shaft, the lode is unproductive. In the 18, west of the mill lode, the lode is worth 1 ton per fm. In Luiz' winze, below the 38, the lode is worth 1 ton per fm.—Great Caunter Lode: The stopes No. 13, above the 20, west of the slide lode, are worth 1¼ ton per fm. In the stopes No. 12, above the 20, west of Oak shaft, the lode is worth ¾ ton per fm. In the 40, west of Oak shaft, the lode is 7 in. wide, composed of quartz mixed with the country.—House Lode: In the 30, west of Oak shaft, the lode is small and poor.—Slide Lode: In the 28, west of the mill lode, the lode is 1½ foot wide, composed of flookan. In the 28, west of the slide lode, on Basto's lode, the lode is small, but producing small stones of copper ore.—Carvalhal Mine: In the 10, east of Henrique's winze, the lode is 2 feet wide, composed of quartz, mundic, and lead, worth 5 cwts. per fm. In the stopes in back of the 10, west of Henrique's winze, the lode is 4 feet wide, producing ¼ ton of lead per fathom.

ST. JOHN DEL REY MINING COMPANY (Limited).—Advices from Brazil:

Morro Vello, Oct. 29.—During the past fortnight the usual work has been carried on without any interruption. The stoping throughout the Cachoeira Mine has been prosecuted uniformly, and also in the eastern part of the Bahu Mine, where the driving is continued eastward, as stated in recent advices on the subject. The number of borers has diminished a little, and the quantity of stone raised is not so much as during the previous two divisions. The general work in the mines has received a fair amount of attention; and the timber-work has had more than usual, both in material and labour, given to it. The quantity of stone delivered on the spalling floor is rather under the average, but the kilas it contained is not quite so much as we have had in some previous divisions.

COST AND PROFIT.—Produce for Oct. is .. 49,501 oits.
Less loss in melting ..... 259 oits.

Leaving ..... 49,242 oits., at 7s. 7d. per oit.	£18,670 18	6
The cost for Oct. is Rs. 90,424 $085, exchange 2s. 0¾d.	9,324 19	8
Thereby leaving a profit of	£ 9,345 18	10

The cost in milreis is nearly two centos less than that incurred in Sept., but the increase in the rate of exchange of ¼d. makes the cost in sterling appear rather more than the previous month. The expenditure is not above what may be expected with our present force and operations. Prices of materials and provisions are favourable at present, and supplies adequate to the general demand. Of nearly all essential articles we have a good stock on hand, and the season so far has been favourable and the rains moderate. The profit realised during Oct. will, it may be hoped, prove satisfactory.

PARAFFINE SAFETY-LAMPS.

Some months since we referred to the invention by Mr. T. Y. Hall, of Newcastle-on-Tyne, of a safety-lamp, which was described by the inventor to possess two material advantages as compared with those in ordinary use; paraffine, petroleum, or similar hydro-carbons, could be used instead of the oil now employed, and additional safety could be secured, as finer gauze, or if necessary several gauzes, one within the other, could be substituted for the single guaze of existing lamps, and as the specification of the patent has now been filed, an opportunity will be afforded for the merits of Mr. Hall's proposition being discussed. It is contended that by Mr. Hall's improvement the lamps will not only be rendered safer, but that a better light will be imparted by them. According to the first part of this invention, says Mr. Hall, it is proposed to apply to a miner's safety-lamp a wick and burner adapted for the combustion of petroleum, paraffine, or other hydro-carbons, in lieu of the ordinary lamp oils, and to apply a suitable chimney to such burners, whereby a very superior economical light is obtained. This superiority in the illuminating power of the lamp enables a considerably finer gauze to be employed; and for extra safety and strength, when thought necessary, will admit of two or more gauzes being used, placed one within the other, without diminishing the light to an incovenient extent, and consequently the lamp is rendered much safer than the ordinary lamps, where, on account of the dimness of the light, the gauze is required to be of a coarse mesh, in order that it may be obscured as little as possible. The chimney may be made either in one length, its upper part projecting inside the upper chamber of the lamp, or it may be made in two parts, the upper part being secured inside the upper part of the lamp, and so fitted that when the parts are united they form one chimney. The wire gauze in the lower part of the lamp is surrounded or protected by a glass cylinder, which prevents the dust from coming in contact with the gauze, and keeps the lamp clean.

The air for supporting combustion may either impinge on the flame at the top of the wick either in a cold state or heated as preferred; in the former case it will enter through suitable adjustable perforations in the lower part of the lamp, and after passing through a series of gauzes into a vault placed above the liquid pan, impinges on the flame close to the wick, and passes up the chimney without entering the space in the body of the lamp between the ordinary gauze cylinder and the chimney. The chimney or shaft admits of expansion when the air is heated, and the gauze cylinder being made to fit closely against a solid flange or collar, or against the chimney surrounding the burner, the hot air is thrown out at the top; or, if hot air be preferred, it will enter by a series of perforations at the top of the lower half of the lamp, and will pass down between the outside of the chimney and the inside of the gauze cylinder or cylinders, and will then enter beneath the burner, where a double or single cap, dome, or arch perforated with small holes, causes the principal part of the air to impinge upon the flame at the top of the wick as before, or both hot and cold air may be used together. Suitable adjustable air-holes are formed in the upper part of the lamp for the purpose of ventilating or allowing the heated air or smoke (if any) to escape therefrom. The top of the chimney of the lamp is provided with a double cap or cover of gauze, and is surrounded externally or internally with wire gauze. The same principle is adopted at the bottom of the lamp, which bottom is removable from the top, and may be replaced by another liquid pan when the first has become empty, so as to maintain a constant supply of liquid to the wick; for this purpose double locks are provided, one at the bottom, and one near the top. An additional guard or shield surrounds the whole outside of the upper part of the lamp, composed either of glass, or of a cylinder of metal perforated near the top on one side only, so as to protect the lamp against any current.

Mr. Hall further proposes that if found desirable the lamp may be provided with a suitable gas-burner in lieu of the wick, and may be made to burn any illuminating gas or gases supplied thereto either from portable receivers or otherwise, as preferred. These lamps may, if desired, be provided with dioptric lenses in lieu of the outer glass cylinder, in order to intensify the light, and to throw it to great distances, so that one lamp will serve to light up several workmen or workings, in lieu of having a lamp in each. When it is requisite to penetrate into very dangerous gases, where there is little or no air, a case or jacket partly of glass to admit light through, and made air-tight, may enclose the whole safety-lamp, the whole or only the glass portion being surrounded or lined, if thought necessary, with gauze, and the fresh air in this case will then be allowed by suitable air-pipes in connection with a receiver to circulate freely in and out of the lamp, and into the air-tight casing surrounding the miner, enabling him to penetrate safely the dangerous gas or gases for short or long distances when such is needed in dangerous mines. The lamp may be provided with one or more wicks of different sizes, the smaller ones being distributed in such a manner as to admit of the access of cold or heated air through ducts terminating at the point where the flame springs from the wick. Various kinds of wicks may be used, composed either of cotton alone, or of cotton intermixed with asbestos. By adapting this lamp so as to hang from a stand or supporting bar, it may be moved or adjusted by the miners to suit their work without leaving their places.

PREVENTING THE FRACTURE OF METALS FROM CRYSTALLISATION.—An invention has been patented by Mr. J. Marshall, of Liverpool-road, which consists in surrounding all metals, whether simple or compound, which when in use are in a state of motion, accompanied by vibration from percussion or any other cause, with a coating of a simple or compound metal or material of a softer nature than that to be protected from crystallisation, and in again covering the core thus protected with any metal hard enough to form the frictional or outer surface. The improvements may be applied throughout the whole length of the metal to be protected, or only at those parts that form the bearings. The main strength of the metal is in the core or central part; the protecting soft metal insulates the core from vibration, while the outer hard metal can be made of any hardness to resist frictional wear.

COMBUSTION OF FUEL.—To promote the more perfect combustion of fuel in furnaces, Mr. Tiffany, of New York, proposes a method of first heating air and mingling it with steam in a chamber separate from the furnace, and then introducing them thus combined into the furnace at a point where they will produce the best effect on the combustion, which is to produce, by mixing them and the gases created by heat and their combination with the carboniferous vapours on their way to the chimney from the incandescent fuel, an inflammable compound, which is at once consumed, and where the heat produced thereby can be effectually employed, while, at the same time, the apparatus through which the steam and air is admitted is protected from being clogged, or otherwise rendered ineffective by accumulation of ashes, the action of fire, &c. A chamber is constructed, so that one or both sides can be heated by the furnace fire. Within it is contained, covered and protected, a perforated pipe, into which steam is admitted, and where is also received a supply of air. The steam and air are heated by coming in contact with the hot plate or side of the chamber at the same time they are commingling, and then passed to the furnace through orifices at the top of the chamber.

ELECTRICITY.—Provisional protection was applied for by Mr. Hermann Hirsch, of Berlin, but the protection was refused, for an invention, which consists in obtaining and applying electricity from any two distinct metals, such as copper and zinc, placed in water or moist earth, so that he can employ the electrical currents produced therefrom without the aid of separate batteries, except in cases where it may be desirable to increase or modify their power.

IRON FOR HOUSES.—To adapt plates of iron and other metal in the construction of dwelling-houses, &c., Mr. P. H. Williams, of Bristol, proposes to bend the edges in such form that one plate may be readily fitted into the edge of the other, leaving the plates or sheets secured together by pins or bars, readily detachable, and capable, when not made up as a structure, of being packed together in a compact manner.

FILTERING AND CRUCIBLES.—Some improved filtering agents, one of which is applicable in the manufacture of crucibles, has been provisionally specified by Messrs. Morgan and Dahlke, of Battersea. Their chief filtering agent, and which they also use in the composition of which they make their crucibles, is the material remaining after the burning or destructive distillation of the Torbane Hill mineral. They manufacture their composition for filtering by combining with the said Boghead material animal charcoal, vegetable charcoal, or sand, all or any one or more of them, and in some cases they employ the said material remaining after the distillation of the Torbane Hill mineral by itself in a granular state, as a filtering agent. They prepare their composition for the manufacture of crucibles by mixing with the Boghead material oily or fatty matters.

MOTIVE POWER ENGINES.—Mr. J. E. Lüdeke, Marke, Hanover, provisionally specified an invention which consists in obtaining motive-power by the rise and fall of metal discs in water. He introduces two discs into a fluid, and after they have well descended therein, he draws them apart, and they have then a tendency to ascend. The rise of the inflated discs is to cause the descent of the closed ones. Mercury is the fluid used by preference.

RAILWAY-WHEELS AND TYRES.—Messrs. Wilson and Tijon, Westminster, propose to compress railway-wheels, tyres, hoops, hollow cylinders, &c., by the use of an expanding mandril, with suitable compressing and shaping dies.

MINERAL OILS.—The continually increasing demand for mineral oil has caused attention to be directed to the brown coal mines, in the neighbourhood of Halle, which it is believed could be made highly remunerative by the application of a capital of 25,000*l.*; but as this amount is considered very large in Germany, it is proposed to offer them to English capitalists upon advantageous terms. From careful examinations of the coal, it is found that it is capable of yielding large quantities of valuable products

THE LLANMORLAIS COLLIERY COMPANY (LIMITED).

Capital £20,000, in 10,000 shares of £2 each.
10s. per share to be paid on application, and 10s. on allotment.

DIRECTORS.

A. C. HOWDEN, Esq., 71, Boundary-road, St. John's-wood, N.W.
Col. R. Y. BUSH, 55, York-terrace, Regent's-park, N.W.
Capt. J. D. MACQUEEN, Whitehall-yard, S.W.
THOS. P. AUSTIN, Esq., 35, Mark-lane, E.C.
S. W. HOOPER, Esq., 45, Fleet-street, E.C.
W. C. KIRKHAM, Esq., 18, St. Anne's-square, Manchester.

BANKERS—The City Bank, Threadneedle-street, London.
SOLICITORS—Messrs. Hancock, Sharp, and Hales, 20, Tokenhouse-yard.
BROKER—F. Everett, Esq., 17, Royal Exchange.
OFFICIAL AUDITOR—F. Maynard, Esq., Accountant, 19, Bread-street, Cheapside.
(Another to be chosen by the shareholders.)
SECRETARY—Mr. Charles Warwick.
OFFICES,—25, BUCKLERSBURY, LONDON, E.C.

This company has been formed for the working of extensive grants of coal, situate in the Gower district, nearly opposite Llanelly, South Wales.

The coal of this district is admitted to be of the very best quality, is highly bituminous, in great demand for house, gas, smiths, and manufacturing purposes.

Two large seams have been already won, and shipments can soon be made.

Detailed prospectuses can be obtained, and samples of the coal seen, at the offices of the company. Application for shares may be made to the bankers, brokers, or secretary. The application must be accompanied by a deposit of 10s. per share on the number of shares applied for. If no shares be allotted, the deposit will be returned in full.

ST. JUST UNITED TIN AND COPPER MINING COMPANY

(LIMITED), IN THE PARISH OF ST. JUST, NEAR PENZANCE, IN THE COUNTY OF CORNWALL.

Incorporated under the Joint Stock Companies Acts, 1856 and 1857.
Capital £15,000, in 6000 shares of £2 10s. each. Deposit on application 5s., and 5s. on allotment.

DIRECTORS.

JAMES WRIGHT, Esq., C.E., 42, New Bridge-street, Blackfriars, London.
Col. BUSH, 55, York-terrace, Regent's-park, London.
THOMAS COOPER SMITH, Esq., 5, Warnford-court, Throgmorton-street, London.
} Directors of the Great Wheal Martha Mining Company.
Capt. GOLDICUTT (late 60th Rifles), Barton Villas, Barnsbury, London.
WENTWORTH LASCELLES SCOTT, Esq., M.S.A., Westbourne-park Bayswater, London.
WILLIAM GREEN, Esq., Beverley-road, Hull, Yorkshire.
GEORGE EUSTICE, Esq., C.E., Hayle, Cornwall.

BANKERS—Robarts, Lubbock, and Co., 11, Mansion House-street, London.
Batten, Carne, and Carne, Penzance, Cornwall.
BROKER—Alexander Young, Esq., 3, Bartholomew-lane, or Stock Exchange, City, London.
SOLICITORS—Messrs. Hancock, Sharp, and Hales, 20, Tokenhouse-yard, City, London.
AUDITORS—Messrs. Cooper Brothers and Co., 13, George-street, Mansion House, London.
MANAGING DIRECTOR—Mr Thomas Cooper Smith.
OFFICES,—5, WARNFORD COURT, THROGMORTON STREET, LONDON.

This company is established for purchasing and working the extensive and valuable tin and copper mines, called the St. Just United, in the parish of St. Just, near Penzance, Cornwall, and situate in a district which is one of the most productive in the county, and has become distinguished by the rich returns and profitable results of mining operations carried on within it.

These mines lie immediately adjacent to the rich Botallack, Levant, and other mines, all making large dividends, and producing tin in the granite inland, and copper ore in the killas under the sea.

The company having been completely registered with Limited Liability, no shareholder can, under any circumstances whatever, be made responsible for a greater amount than the shares to which he subscribes.

A considerable portion of the capital has been already subscribed, and the directors will proceed to allot the shares in a short time.

Prospectuses, plans, forms of application for shares, and any other information, may be obtained of the managing director, at the offices of the company, or from ALEXANDER YOUNG, Esq., Stock Exchange, London.

ST. JUST UNITED TIN AND COPPER MINING COMPANY (LIMITED).

—MR. THOS. COOPER SMITH having ACCEPTED the MANAGEMENT of this COMPANY, all future applications must be made to him, at the new offices, 5, Warnford-court, Throgmorton-street, London.

THE CARDIGANSHIRE CONSOLIDATED MINING COMPANY (LIMITED).

Increase of nominal capital to £50,000. In 10,000 shares of £5 each.
The shareholders will not be liable beyond the amount of their respective subscriptions.
5s. per share to be paid with application, and 15s. per share on allotment.

DIRECTORS.

CHARLES COPLAND, Esq. (Messrs. Copland and Co.), Bury-street, St. Mary Axe.
JOHN KILNER, Esq., Bury St. Edmunds.
PARKE PITTAR, Esq. (Messrs. P. Pittar and Co.), 26, Gresham-street.
PERCY MARSH SHARP, Esq. (Messrs. Hancock, Sharp, and Hales), 20, Tokenhouse-yard.
(With power to add one more.)

SOLICITORS—Messrs. Hancock, Sharp, and Hales, 20, Tokenhouse-yard.
CONSULTING MINING ENGINEERS—Messrs. Phillips and Darlington, 26, Gresham-street.
BANKERS—London and Westminster Bank, Lothbury.
AUDITOR—Charles Eley, jun., Esq., 27, Great George-street, Westminster.
LONDON MANAGER, AND OFFICES—J. H. Murchison, Esq., No. 117, Bishopsgate-street Within.

BROKERS.

London ..... Messrs. Alexander and Lindow, 21, Tokenhouse-yard.
Manchester.... James Gorton, Esq., Newmarket Chambers.
Aberdeen..... H. C. Oswald, Esq., Marischall-street.
Exeter..... Mr. John Harris.
Dublin..... Messrs. Smyth and Du Bédat, 11, College Green.

ABRIDGED PROSPECTUS.

This company holds the celebrated lead and copper mines known as Esgair-hir and Esgair-fraith, situate in the rich mineral district of Cardiganshire, and which many years ago made enormous returns.

These mines are also on the same lode as the Dyliffe Mine, for which Mr. Bright, M.P., and his friends, gave £24,000, and having laid out £10,000 more in explorations, &c., their returns are now upwards of 200 tons of lead ore per month, which it is believed give a profit of about £1000 per month. The Cardigan Consols Mines are yet only 60 fms. from surface, and the sett extends two miles on the course of the lodes.

Applications for shares, in the form annexed to the prospectus, accompanied by a deposit of 5s. per share, may be addressed to the directors, or to the brokers. On allotment, 15s. per share additional will have to be paid, but if no shares are allotted the deposit will be returned.

Detailed prospectuses, with the reports, and forms of application for shares, may be obtained at the office, 117, Bishopsgate-street Within, E.C., or from any of the brokers. The prospectus will also be found at length in the *Times*, *Daily News*, *Morning Post*, *Economist*, *Mining Journal*, and *Limited Liability Journal*, of 30th November.

THE ASHCROFT ANGLESEY COPPER MINING COMPANY (LIMITED).

Capital, £12,500, in 12,500 shares of £1 each.
Shareholders only liable for the amount of their subscriptions.
10s. per share to be paid on application for shares, with two calls of 5s. per share (if required), at intervals of not less than three months.
The company is completely registered according to the Limited Liability Acts of Parliament, passed in the years 1856 and 1857.

DIRECTORS.

THOMAS P. ELLIOTT, Esq. (Agent to the Hon. Mr. Stanley, M.P.), Penrhos Bradwin, Holyhead.
Capt. KNOX, Proprietor of *Irish Times*, Fitzwilliam-square, Dublin.
HENRY PRICE, Esq., J.P., Blackrock, county Dublin.
PETER ROE, Esq., Clarendon House, Rathgar, county Dublin.
JAMES DIGGES LA TOUCHE, Esq., J.P. (Director Midland Great Western Railway Company), Dundrum, county Dublin.

BANKERS.

National Provincial Bank of England, at Manchester, Chester, Holyhead, Bangor, and Carnarvon.
National Bank of Ireland, Dublin, Cork, and London.
SOLICITOR—James Malley, Esq., 48, Upper Sackville-street, Dublin.

BROKERS.

Messrs. Boyle, Lowe, Pim, and Co., 35, College-green, Dublin.
J. Cunningham and Co., Belfast.
Mr. Connell, South Mall, Cork.
Messrs. Laurence, Son, and Pearce, Auction Mart, London.
Mr. George Hancock, 15, Tithebarn, Liverpool.
Mr. James Gorton, Newmarket-buildings, Manchester.

OFFICES.

BRANCH OFFICES ..... 48, UPPER SACKVILLE STREET, DUBLIN.
REGISTERED OFFICES.. 2, BOSTON STREET, HOLYHEAD.

ABRIDGED PROSPECTUS.

This company is formed for the purpose of purchasing the lease of a very valuable tract of mineral land in the Island of Anglesey, in the parish of Holyhead, held under lease from the Hon. W. O. Stanley, M. P., at a moderate royalty, for 22 years yet unexpired.

Assays, made by Messrs. Johnson and Son, Basinghall-street, London, of average portions, prove the stuff to contain, when dressed, 7 to 10 per cent. of copper at the present depth.

Reference is particularly invited to the extract of a letter from one of the most scientific geologists of the age, Sir Richard Griffith, Bart., of the Board of Public Works, Dublin, who has kindly given permission for his opinion to be added to the prospectus, as well as to the reports from the eminent mining engineers, John Hitchins, Esq., John H. Clement, Esq., C.E., F.G.S., and Alfred Jenkin, Esq., showing the nett profits to be about 25 per cent. upon the nominal, and 50 per cent. upon the proposed paid-up capital at the present workings.

Encouraged by the large returns of the Parys Mountain and Mona Mines, situated at Amlwch, in the same island and county, the directors have formed a very high opinion of the value of this venture, which they believe can be made productive by an outlay of not more than £5000.

The situation of the mine is all that can be desired, being only two miles on a level road, from the Holyhead railway station, and ten yards from the sea, at high water.

The royalty is light, and every precaution has been taken by the directors to economise the preliminary expenses.

Already have a considerable number of shares been applied for.

Specimens of the ore may be seen at the offices. The liability of the shareholders will be limited to the exact amount of their shares.

No further call can be made on the holders of the shares.

If no allotment is made, the deposits will be returned in full.

Prospectuses may be obtained, and application for shares will be received at the offices by the directors and brokers of the company; but in no case will any application be attended to unless a deposit of 10s. per share be paid to the bankers of the company, and their receipt forwarded to the office.

The Miners' Association of Cornwall and Devonshire.

THE MINERS' ASSOCIATION OF CORNWALL AND DEVONSHIRE.

CHARLES FOX, Esq., President.

The QUARTERLY MEETING of the above association will be HELD at the New Hall, Redruth, on MONDAY, the 30th inst., at Half-past Two o'clock in the afternoon, when papers will be read on Mining and Mine Engineering, and other subjects of interest will also be brought before the notice of the members of the association.

The attendance of those interested in mining is earnestly invited.

ALMOND E. PAULL, Hon. Sec. for the West Central District

December 18, 1861.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

HARVEY AND OTHERS v. HALL.
IN RE NORTH PROVIDENCE MINE.

TO BE SOLD, pursuant to an Order made in the above-mentioned Cause, and dated the 12th day of December inst., BY PUBLIC AUCTION, at HALAMANNING MINE, in the parish of St. Hilary, on Friday, the 3d day of January next, at Twelve o'clock at noon, a 36 in. cylinder STEAM ENGINE, with BOB and BOILER 10 tons.

The lighter parts and brass work of the engine are at the stores of, and may be seen on application to, Messrs. HIGGS and SON, at Penzance; and for further particulars, application may be made to the officer of the Court in possession at Halamanning Mine.

HODGE, HOCKIN, AND MARRACK, Plaintiff's Solicitors, Truro.

Dated Registrar's Office, Truro, December 18, 1861.

EGLWYSYLAN, GLAMORGANSHIRE.
IMPORTANT ESTATES, WITH MINERALS.

MESSRS. JACKSON, NEALE, AND CO. WILL SELL, BY AUCTION, at the Cardiff Arms Hotel, in Cardiff, on Saturday, the 4th day of January, 1862, at Twelve o'clock precisely (by direction of a mortgagee, acting under absolute powers of sale) the undermentioned conveniently situated and very VALUABLE FREEHOLD and LEASEHOLD PROPERTIES, in two lots.

The freeholds, comprising two estates, called BRYNTAIL and CRAIG ALFA, situate near Treforest, in the parish of Eglwysylan, and containing about 157 acres, are reported to richly abound in paving stone, ironstone, and superior coal, of the estimated value of £90,000. They are situate in the South Wales mineral basin, near the high road, and equidistant from Cardiff and Merthyr Tydvil, and adjacent to the Eglwysylan Mountain, the Glamorganshire Canal (which has a terminus at the port of Cardiff), and the Treforest station of the Taff Vale Railway.

One hundred acres of coal and a piece of land, containing half an acre, are leased for 14 years, from 17th June, 1859, at an annual rent of £500, and 1s. per ton for all coal raised in any one year above 10,000 tons.

The lease contains very advantageous provisions, and, amongst others, for the lessees laying down a railway from the colliery to the Glamorganshire Canal, distant about half a mile, and leaving, at the determination of the term, such railway, and all erections, works, and additions for the landowner's benefit.

There are several veins of coal under each estate, varying from 3 ft. to 9 ft. in thickness, and averaging about 45,029 tons of coal per acre.

These facts render the auction a legitimate and admirable opportunity for the establishment of a limited liability company to purchase and work the minerals.

It is estimated that the coal can be worked and shipped at Cardiff at a nett profit of about 3s. per ton.

The leaseholds (the minerals beneath which are reserved) comprise two plots of ground, adjoining Craig Alfa, and are parts of the Pentrebach lands, one of such plots containing one acre and a half, with the four tenements thereon, called Wyf Dho, Wyf Neithiwr, Wyf Hedy, and Wyf Heno, held for the residue of a term of 21 years, from Dec. 25, 1849, renewable until the expiration of the full term of 84 years, at the annual chief rent of £22 10s.; and the other plot containing one statute acre, with the dwelling-house and offices thereon, part whereof has heretofore been used as a beer-house, called Gelhy Fedhig, and the other part as a surgery, and a strip of land used as a roadway thereto, respectively held for the residue of a term of 21 years, from March 5, 1853, renewable for 84 years, under the yearly chief rent of £20. The freeholds and first-mentioned leaseholds will comprise Lot 1, and the remainder of the leaseholds Lot 2.

NOTE.—A copy of the colliery lease, an abstract of the lease of a part of the leasehold premises, and the original lease of the residue will be produced at the auction, and in the interim may be inspected at the office of Mr. RICHARD STUBBS, solicitor, 1, Nicholas-street, Bristol, of whom further particulars with plans may be had; as well as of the auctioneers, Shannon-court, Corn-street, Bristol; or Mr. TRENERRY, solicitor, 1, Nicholas-street, Bristol; or in London, of Messrs. GOSLING AND GIRDLESTONE, solicitors, 18, New-street, Spring Gardens, S.W.

TO BE SOLD, BY PRIVATE CONTRACT, that EXTENSIVE and VALUABLE SILVER-LEAD MINE, known as TREGARDOCK MINE, situate in the parish of ST. TEATH, near CAMELFORD, together with the MATERIALS thereon, consisting of one horse whim, kibbles, and rope; 315 fms. of iron tram-road and saddles, 100 fms. zinc air pipes, 50 fms. of launders; one air machine, wheels, &c.; 60 fms. of ladders; smiths' bellows, anvil, and tools; 2000 ft. of flooring slate, together with hutches, strakes, dressing utensils, and a large quantity of iron, timber, &c.

To view the same, apply to the captain, on the mine; and for further information, apply to Capt. JNO. GOLDSWORTHY, of East Wheal Russell, near Tavistock; or to Capt. WM. RICHARDS, Bank House, Redruth.—Dated December 18, 1861.

MINERAL PROPERTY TO LET.—TO BE LET ON LEASE, about THREE HUNDRED AND SIXTY ACRES of COAL GROUND, believed to contain the celebrated Rhondda seams of coal, together with the Aberdare steam coal measures. A large bratticed pit has been sunk on the property, to the depth of about 70 yards. The property adjoins the Taff Vale Railway, and is within half a mile of the post town of Pontypridd, Glamorganshire, and 12½ miles from the port of Cardiff.—For terms and further particulars, apply to Messrs. BURBY and CARLISLE, solicitors, New-square, Lincoln's Inn, London, W.C.; or to ALEXANDER BASSETT, Esq., mining engineer, Cardiff, Glamorganshire.

TO TIN-PLATE MANUFACTURERS, IRONMASTERS, &c.—TO BE LET, for a term of years, as may be agreed on, with immediate possession, the EXTENSIVE TIN-PLATE and IRONWORKS, known as the DERWENT TIN-PLATE WORKS and SEATON IRONWORKS, situate near Workington, in the county of Cumberland, and in the centre of the hematite iron district.

The works include the whole of the erections, furnaces, machinery, plant, and tools requisite for the manufacture of tin-plates and sheets on a large scale, the rolls, shears, &c., being driven by a 60 horse power steam-engine, and the whole being in the most complete and efficient working order, and capable of producing 300 boxes of tin-plates per week.

The mills might with a little alteration be adapted for rolling boiler plates and bars.

There is an unlimited supply of water-power, with several wheel races, one of which is occupied by a powerful water-wheel.

The works also contain a blast-furnace, with suitable blowing machinery and heating stoves, and a number of coke ovens and other requisites.

Adjoining the premises are a commodious family residence, with large garden, a manager's house, and twelve workmen's cottages.

Coal, iron ore, limestone, &c., abound in the neighbourhood, and the works are connected with the Cockermouth and Workington Railway by means of extensive sidings.

For further particulars, apply to Mr. HENRY FLETCHER, of the Lowca Ironworks, near Whitehaven; or to Mr. JAMES LUMB, Whitehaven.

Whitehaven Castle, December, 1861.

THE TANYBWLCH SLATE QUARRY, LLANLLECHID, BANGOR, NORTH WALES.—This quarry has only very recently been opened by the owner, and although the operations have been very limited the quantity of slates obtained has been very considerable, and of superior quality.

The quarry is situated within two miles of the Penrhyn Slate Quarries, the property of the Hon. Col. E. G. Douglas Pennant, M.P., and has every facility for the conveyance the slates to the town and port of Bangor, distant four miles, and thence by rail and ship transit.

A report of the capabilities of the quarry has recently been made by an experienced practical surveyor, a copy of which will be forwarded on application to the owner of the quarry, Mrs. TAYLOR, Albion Hotel, Bangor, of whom particulars as to terms of letting can be obtained.

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, OOZELL STREET NORTH, BIRMINGHAM.

STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—

REFINED METALLIC NICKEL. | OXIDE OF COBALT. [WIRE, &c.
REFINED METALLIC BISMUTH. | GERMAN SILVER—IN INGOTS, SHEET
NICKEL AND COBALT ORES PURCHASED.

THE AMMAN (ABERDARE) COLLIERY COMPANY (LIMITED).

Incorporated under the Joint-Stock Companies Acts, 1856 and 1857, whereby the liability of shareholders is limited to the amount of their shares.
Capital £100,000, in 10,000 shares of £10 each.
Deposit, £1 per share on application.

DIRECTORS.

The Right Hon. the EARL OF KINTORE, Lord Lieutenant of Kincardineshire.
GEORGE BROCKELBANK, Esq., Greenwich (Director of the General Steam Navigation Company).
EWING P. COLQUHOUN, Esq. (Messrs. Colquhoun and Thomson), Laurence Pountney-hill.
CHARLES LEAN, Esq., Llantrissant, late of the Cwm Avon Ironworks.
WILLIAM LLOYD, Esq., J.P., Newtown, Montgomery (Director of the Oswestry and Newtown, Newtown and Llanidloes, and Mid Wales Railway Companies).
GEORGE OFFOR, Esq. (Messrs. Seymour, Peacock, and Co.), London and Liverpool.
JOHN E. PANTER, Esq., Lee Park, Blackheath.
Sir EDWIN PEARSON, F.R.S., Wimbledon, Surrey (Director of the Scottish Australian Investment Company).
JAMES LEWIS ROBERTS, Esq., J.P., Gadlys, Aberdare, Glamorganshire.
JOSEPH TILSTON, Esq., Lower Kensington-gore.
Major-General W. G. WHITE, 14, St. James's-square.

AUDITOR—George H. Jay, Esq. (Messrs. Quilter, Ball, Jay, and Co.), Moorgate-street.
SOLICITORS—Messrs. Johnston, Farquhar, and Leech, London; Messrs. Prothero and Fox, Newport, Monmouthshire.
BANKERS—London and Westminster Bank, Lothbury; West of England and South Wales Bank, Cardiff and Aberdare.
BROKERS—Messrs. Field, Son, and Wood, 7, Warnford-court; Philip Woolley, Esq., 26, Tokenhouse-yard.

Remarks on the commercial advantages which peculiarly distinguish this undertaking will be found in the following journals:—"Daily News," "Morning Post," "Daily Telegraph," "Standard," and "Morning Star" of the 12th instant; "Times," "Morning Herald," "Morning Chronicle," and "Shipping Gazette" of the 13th; "Colliery Guardian," "Money Market Review," "John Bull," "Mining Journal," "Liverpool Chronicle," "Manchester Courier," and "Liverpool Courier" of the 14th; "Observer" of the 15th, "Liverpool Journal of Commerce" of the 16th; and other London and provincial journals.

Prospectuses, surveyor's reports, forms of application for shares, and other particulars, may be obtained from the brokers, Messrs. FIELD, SON, and WOOD, 7, Warnford-court, and PHILIP WOOLLEY, 26, Tokenhouse-yard; or from the secretary, FRANCIS HAWKINS, Esq., at the temporary offices of the company, 15, Tokenhouse-yard, London, E.C.

BEDFORD IRONWORKS, TAVISTOCK.

NICHOLLS, WILLIAMS, AND CO. have generally a GOOD STOCK of SECOND-HAND MINING MATERIALS FOR SALE. They also MANUFACTURE STEAM ENGINES of every description on the newest principle. Castings and wrought-iron work made at the shortest notice. Machinery sent to all parts of the world. Steam boilers and chains warranted of the best description.

FOR SALE, a NEW and POWERFUL CORNISH CRUSHER, complete, with raft, wheel, and rolls, 30 in. diameter, with wrought-iron spindles. Also, a WATER-WHEEL, nearly new, 30 ft. high by 5 ft. wide, all iron except arms. Second-hand materials of all kinds always for disposal, at NICHOLLS, WILLIAMS, and Co.'s, Bedford Ironworks, Tavistock, Devon.

CREASE'S PATENT EXCAVATING MACHINERY, for SUPERSEDING the SLOW and EXPENSIVE USE of MANUAL LABOUR in SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to drive through any rock of average hardness at a minimum rate of 1 fm. per diem, and to sink shafts at the rate of 2 fms. in three days.

MR. CREASE will undertake contracts for sinking shafts, driving levels, &c., at an enormous reduction of time and great saving in cost.

Applications to be addressed to Mr. GEORGE T. CURTIS (sole agent), 17, Gracechurch-street, London, E.C.

By providing the power of calculating the time and cost to explore a certain depth and extent of ground, speculation in mining will be assimilated to commercial pursuits, with this unmistakable advantage—that when the ground has been once carefully and judiciously selected, and operations properly and systematically carried out for its development, there would be far less chance of unsatisfactory results than are met with by merchants and manufacturers in the usual routine of their business. As this important invention must beneficially interest the landowners, mine proprietors, merchants, and miners, we opine it will meet with immediate adoption.—*Mining Journal.*

HALL AND WELLS, PATENTEES AND MANUFACTURERS OF SUBMARINE TELEGRAPH CORES, CABLES, &c.—TELEGRAPH CONDUCTORS INSULATED with INDIA RUBBER at £5 per mile and upwards, PARTICULARLY ADAPTED for MINING PURPOSES. Further particulars as to price of cores, cables, &c., can be had on application at 60, Aldermanbury, City, E.C.; and Steam Mills, Mansfield-street, Borough-road, Southwark, S.E.

Copper wire covered with silk, cotton, or any other material, to order.

PATENT LEVER BREAK, FOR RAILWAY WAGONS, doing away with the objectionable break rack. Can be APPLIED to EXISTING STOCK at a TRIFLING EXPENSE. Royalty moderate. Models can be seen at No. 1, Moorgate, London, E.C.; and the breaks in action at the works of the Railway Carriage Company; at the Peterboro' Station, on the Eastern Counties Railway; the Rugby Station, London and North-Western Railway; the Cardiff Docks Station, Taff Vale Railway; and at the Works, Oldbury, near Birmingham, where all communications are requested to be sent.

INCRUSTATIONS IN STEAM BOILERS.—FIRTH'S ENGINEERS' FRIEND, or BOILER COMPOSITION, is the BEST and CHEAPEST PREPARATION ever introduced for REMOVING and PREVENTING INCRUSTATIONS in STEAM BOILERS. By its use chipping, and the consequent wear and tear, is abolished, and a SAVING of FUEL EFFECTED of from FIFTEEN to TWENTY PER CENT.

LONDON AGENT,—MR. SEPTIMUS ROBINSON, 32, FENCHURCH STREET.
AGENT IN CORNWALL,—MR. THOS. FOSS, CAMBORNE.
LEEDS,—MR. J. P. C. WESTWOOD, BEESTON HILL.
A list of testimonials forwarded on application.

PATENT MOVABLE FIRE BAR COMPANY (LIMITED).

DIRECTORS.

SAML. H. BLACKWELL, Esq., Ironmaster, Dudley.
SAML. THORNTON, Esq., Merchant, Birmingham.
JONATHAN GRINDROD, Esq., C.E., Liverpool.
JOHN LLOYD, Esq., Engineer, Lilleshall.
OFFICES,—16, HACKIN'S HEY, LIVERPOOL.

WRIGHT'S PATENT BARS for LOCOMOTIVE, MARINE, and STATIONARY BOILERS, PUDDLING and OTHER FURNACES.

The proprietors have great pleasure in recommending the above as the simplest and best arrangement in use. The bars have already been adopted by some of the leading firms in the Midland Iron District, in various channel and ocean-going steamers, and the large breweries in Burton, and have, in every case, given great satisfaction.

For prices charged, apply at the company's office, Liverpool.

AGENTS WANTED; also, TENDERS from Ironfounders for CASTING the BARS.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

BUTLIN'S APPARATUS FOR SUPERHEATING STEAM, by which means a SAVING of THIRTY PER CENT. in the CONSUMPTION of FUEL is EFFECTED, TWENTY-FIVE PER CENT. LESS WATER is REQUIRED to FEED BOILERS, a GREAT INCREASE of POWER is OBTAINED, and the BOILER is RENDERED MORE DURABLE. The above patent can be applied to any boiler, either new or old, and to every description of engine. Most extraordinary reports have been received from parties who have used it, equally satisfactory to the following letters, and any further particulars may be obtained by applying to the patentee,

W. BUTLIN, VULCAN WORKS, WESTON STREET, NORTHAMPTON.

TESTIMONIALS.

Leadenhall-street, London, E.C., July 3, 1860.

DEAR SIR,—Having applied your patent steam superheater to the boiler of our steamship, *City of Nantes*, we have great pleasure in being able to state that your apparatus effects a saving of at least 30 per cent. in the consumption of fuel, besides giving additional speed upon the screw. We do not hesitate in giving our opinion that your invention is a most important one, and one which must come into general use. We approve of your arrangements for admitting saturated steam with the superheated, to regulate the temperature at pleasure. Your plan of filling the heater with water during the time steam is being got up we think is quite a new idea, and remedies one of the great objections to superheaters generally—the rapid destruction of the tubes by the fire while steam is getting up. You are at liberty to make what use you please of this letter, as we think so valuable an invention ought to be made known to the steam shipping interest of this country. We are, dear Sir, your's truly,

W. Butlin, Esq., Northampton. —— LANGTON AND WILSON.

Little Houghton, Northampton, July 29, 1861.

DEAR SIR,—We have given our engine a sufficient test, both in thrashing and sawing, since the introduction into it of your superheater, to enable us to speak confidently of the great improvement made by the alteration. We believe that your advertisements do not exaggerate the excellence, in any respect, of your patent. Many respectable parties who witnessed the working of the engine are willing to bear testimony to the truth of our statements. We remain, dear Sir, yours very truly,

—— SMITH AND THURSTON.

Naseby, Northampton, Aug. 24, 1861.

SIR,—I have much pleasure in being able to state that since your patent steam superheater has been applied to my engine I find a considerable reduction in the consumption of fuel, much less water is required to feed it, and a great increase of power is obtained. I am much pleased with the alteration. —— Yours truly, L. WILFORD.

Earl's Barton.

SIR,—I am well satisfied with the alteration made in my engine, as it takes less coal and water since your heater has been introduced into it.

Yours truly, CHRISTOPHER COLEMAN.

PATENT BITUMINIZED GAS, WATER, AND DRAINAGE PIPES.—These PIPES POSSESS all the PROPERTIES NECESSARY for the CONVEYANCE of GAS and WATER, and also for DRAINAGE PURPOSES—viz., GREAT STRENGTH, GREAT DURABILITY, and PERFECT INOXIDABILITY, and being non-conductors are not affected by frost, like metal pipes. They are proved to resist a pressure of 220 lbs. on the square inch (equal to 500 ft. head of water), are only one-fourth the weight, and considerably cheaper than iron pipes. They are made in 7 ft. lengths, and the joinings are simple and inexpensive. These pipes have been in use in France, Spain, and Italy nearly three years, where the demand for them is very great. The opinions of the press on a public test at the Houses of Parliament, before a large number of engineers and other scientific gentlemen, may be had, with further particulars, at the office of the company, on application to Mr. ALEX. YOUNG, 14A, Cannon-street, London, E.C., where sample pipes may be obtained for trial.

SARL AND SONS, 17 and 18, CORNHILL, respectfully SOLICIT a VISIT to their magnificent ESTABLISHMENT. The ground floor is more particularly devoted to the display of FINE GOLD JEWELLERY, GOLD and SILVER WATCHES, and FINE GOLD CHAINS.

The SILVER PLATE DEPARTMENT is in the gallery of the building, and consists of every article requisite for the table and sideboard.

In the magnificent show-rooms is displayed a large and beautiful stock of ARGENTINE PLATE, the manufacture of which has stood the test of 20 years' experience.

SARL and SONS have also fitted up a separate show-room for the display of DRAWING and DINING ROOM CLOCKS of the most exquisite designs. Books containing drawings and prices may be had upon application.

SARL AND SONS, 17 and 18, CORNHILL, LONDON.

TO INVENTORS.—All INTENDING PATENTEES should PROCURE the PRINTED INFORMATION regarding PATENTS, their COST, and the MODE of PROCEDURE to be adopted, ISSUED GRATIS by the GENERAL PATENT COMPANY (LIMITED), 71, FLEET STREET, LONDON.

R. MARSDEN LATHAM, Sec.

ALBERT AND MEDICAL LIFE ASSURANCE, 7, WATERLOO PLACE, PALL MALL, LONDON, S. W.

ESTABLISHED 1838.

The business of the Medical, Invalid, and General Life Assurance Society having been amalgamated with the Albert Life Assurance Company, the united business will henceforth be carried on under the above title.

Accumulated fund exceeds	£500,000
Subscribed capital	447,180
Paid-up capital	137,000
Annual income from life premiums, upwards of	220,000

The new business is now progressing at the rate of more than £25,000 per annum.

From Prof. De Morgan's report upon the last valuation of liabilities (end of 1858), and the statements of accounts, it appeared at that time that the surplus in favour of the Albert business alone, after providing for every liability, was £192,925 2s. 11d.

HENRY WILLIAM SMITH, Actuary.
C. DOUGLAS SINGER, Sec.

TO CAPITALISTS.—MESSRS. LEICESTER AND CO., INSPECTORS and VALUERS of MINES, &c., MELBOURNE, VICTORIA, OFFER THEIR SERVICES to SELECT and INVEST CAPITAL in MINING PROPERTIES, for which they charge 2½ per cent.; and they also COLLECT and TRANSMIT the DIVIDENDS, charging £5 per cent. on their amount. Messrs. LEICESTER and Co. earnestly call the attention of capitalists to the many opportunities they possess of investing, to pay from £50 to £150 per cent. per annum. Sums under £50 will be charged extra. All remittances must be made through our agent, Mr. RICHARD MIDDLETON, *Mining Journal* office, 26, Fleet-street, London; or direct through our bankers the Union Bank of Australia.

VENTILATION OF MINES.

ELLIS LEVER,
WEST GORTON WORKS, MANCHESTER,
SOLE MANUFACTURER OF THE
IMPROVED SAFETY BRATTICE,
FOR
AIR-COURSES, FLY-DOORS, AND STOPPINGS,
IN THE
WORKINGS OF FIERY COLLIERIES.

ELLIS LEVER DESIRES to INFORM the OWNERS and MANAGERS of COLLIERIES in all parts of the kingdom that THEY CAN BE SUPPLIED at a DAY'S NOTICE with a STOCK of AIR-PROOF BRATTICE or DOOR CLOTH of ANY WIDTH, and in VARIOUS QUALITIES, from SIXPENCE PER SQUARE YARD.

Several miles of the FLEXIBLE TUBING, INVENTED and MANUFACTURED by ELLIS LEVER is now USED for the PURPOSE of VENTILATION in SINKING SHAFTS and EXPLORING DRIFTS. This TUBING is AIR-PROOF and WATER-PROOF, can be made any size, from 6 inches diameter to 3 feet diameter, in unlimited lengths. Every tub is fitted internally with hoops, 12 inches apart, which prevent their collapsing.—Prices and further information will be sent on application to
ELLIS LEVER, MANCHESTER. 99

AYTOUN'S PATENT SAFETY CAGE AND HOIST.
CHANGE OF LICENSE FEE WILL SHORTLY TAKE PLACE,
from £1 to £6 and upwards.
[See *Mining Journal* of December 14.]
Apply to the patentee, ROBERT AYTOUN, 3, Fettes-row, Edinburgh. 100

PATENT SAIETY FUSE.—The GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH DAVEY, and PRYOR who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE *has not a thread wrought into its centre*, which, being patent right, infallibly *distinguishes it from all imitations*, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.
Address,—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingmill, Cornwall. 101

DAVEY'S PATENT BLASTING POWDER,
MANUFACTURED BY DAVEY BROTHERS AND CO.,
NANCEKUKE POWDER WORKS, TUCKINGMILL, CORNWALL.

This blasting powder possesses the following advantages over every other in use:—Its COMBUSTION is SLOWER and MORE PERFECT when confined in the hole, it is MORE IMPERVIOUS to MOISTURE, PRODUCES LESS SMOKE, is LESS DANGEROUS, it BURSTS as MUCH ROCK with a CHARGE OCCUPYING the SAME or even LESS SPACE, and its WEIGHT being TWENTY to TWENTY-FIVE PER CENT. LESS than ordinary gunpowder, a SAVING of ONE-FOURTH the COST is EFFECTED.

DAVEY BROTHERS and Co. beg to state that this powder is specially made for blasting, and from its slow combustion is not adapted for projectiles. They would, therefore, caution consumers not to be induced by interested parties to put it to a fallacious trial by firing a ball from a mortar, which is no test of its explosive force when confined. 102

BASTIER'S PATENT CHAIN PUMP,
APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, MARINE, FIRE, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, farmers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—

1.—It utilises from 90 to 92 per cent. of the motive power.
2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.
3.—It occupies a very small space.
4.—It raises water from any depth with the same facility and economy.
5.—It raises with the water, and without the slightest injury to the apparatus sand mud, wood, stone, and every object of a smaller diameter than its tube.
6.—It is easily removed, and requires no cleaning or attention.

A mining pump can be seen daily at work, at Wheal Concord Mine, South Sydenham, Devon, near Tavistock; and a shipping pump at Woodside Graving Dock Company (Limited), Birkenhead, near Liverpool.

J. U. BASTIER, sole manufacturer, will CONTRACT to ERECT his PATENT PUMP at HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors and others, for the USE of his INVENTION.
OFFICES, 19, MANCHESTER BUILDINGS, WESTMINSTER, LONDON.
London, Oct. 10, 1859. Hours from Ten till Four. J. U. BASTIER, C.E. 103

THE PARAFFIN, OR MINERAL OIL SAFETY GAUGE, made for the Asphaltum Company (Limited), ENABLES CONSUMERS to AVOID PURCHASING PARAFFIN or MINERAL OIL of an EXPLOSIVE or DANGEROUS KIND. Price, with a tin oil holder, 1s. 6d. each; forwarded by post upon receipt of 18 stamps.—Apply at the offices of the company, 3, Great Winchester-street, London E.C. 104

AUSTRALIA AND NEW ZEALAND
WHITE STAR EX-ROYAL MAIL CLIPPERS,
SAILING FROM
LIVERPOOL to MELBOURNE on the 1st and 20th of every month.
*** Passengers holding Victoria passage warrants will be forwarded to Melbourne by these vessels.

Ship.	Captain.	Register.	Burmen.	To sail.
MERCHANT PRINCE.....	McLAY	1752	500	Jan. 20.

The magnificent clipper, *Merchant Prince*, is one of the largest and finest vessels in the Australian fleet. She has proved herself to be one of the fastest ships afloat, having made the passage from England to Melbourne in 72 days. Her last voyage was from Liverpool to Melbourne, port to port, in 77 days. Her accommodations for all classes of passengers are very superior. The saloon is a spacious and comfitable apartment, replete with all necessaries for the voyage.

For freight or passage apply to the owners, H. T. WILSON and CHAMBERS, 21, Water-street, Liverpool; or to GRINDLAY and Co., 124, Bishopsgate-street, and 55, Parliament-street; or SEYMOUR, PEACOCK, and Co., 116, Fenchurch-street, London.
Willox's Australian and New Zealand hand-books sent for two stamps. 105

INVESTMENTS IN BRITISH MINES.—MR. MURCHISON publishes a QUARTERLY REVIEW OF BRITISH MINING, giving at the same time the POSITION and PROSPECTS of the MINES at the end of each Quarter, the DIVIDENDS PAID, &c.; price One Shilling. RELIABLE INFORMATION and ADVICE will at any time be given by Mr. MURCHISON, either personally or by letter, at his Offices, No. 117, BISHOPSGATE-STREET WITHIN, LONDON, where copies of the above publication can be obtained.

OPINIONS OF THE PRESS ON MR. MURCHISON'S WORK ON BRITISH MINING, PUBLISHED IN 1856.

Mr. Murchison's new work on Britis. Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments.—*Mining Journal.*

The book will be found extremely valuable.—*Observer.*

A valuable guide to investors.—*Herapath.*

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines.—*Morning Herald.*

A valuable little book.—*Globe.*

Of special interest to persons having capital employed, or who may be desirous of investing in mines.—*Morning Chronicle.*

As a guide for the investment of capital in mining operations inestimable. One of the most valuable mining publications which has come under our notice, and contains more information than any other on the subject of which it treats.—*Derby Telegraph.*

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison.—*Leeds Times.*

To those who wish to invest capital in British Mines, this work is of the first importance.—*Welshman.*

This is really a practical work for the capitalist.—*Stockport Advertiser.*

This work enables the capitalist to invest on sound principles in truth, it is an excellent guide.—*Plymouth Journal.*

All who have invested, or intend to invest, in mines, would do well to consult this very useful work.—*Ipswich Express.*

Persons desirous to invest their capital in mining speculations will find this work a very useful guide.—*Warwick Advertiser.*

We believe a more useful publication, or one more to be depended on, cannot be found.—*Plymouth Herald.*

Those interested in mining affairs, or who are desirous of becoming speculators should obtain and carefully peruse the work.—*Monmouth Beacon.*

With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital.—*Poole Herald.*

Every person connected, or who thinks of connecting himself with mining speculations should possess himself of this book.—*North Wales Chronicle.*

It is full of carefully compiled and reliable information relative to all the known mines of the United Kingdom.—*Sheffield Free Press*

Mr. Murchison will be a safe and trustworthy guide, so far as British Mines are concerned.—*Bath Express.* 106

KEATING'S PALE NEWFOUNDLAND COD LIVER OIL has been analysed and recommended by Professors Taylor and Thomson, who, in the words of the late Dr. Pereira, say that "the finest oil is that most devoid of colour, odour, and flavour," characters this oil will be found to possess in a high degree. Half-pints, 1s. 6d.; pints, 2s. 6d.; quarts, 4s. 6d.; and five-pint bottle, 10s. 6d., imperial measure. —79, St. Paul's-churchyard, London. 107

DR. SMITH has just published a free edition of his valuable work, the PRIVATE MEDICAL FRIEND (116 pages), on the self Cure of Nervous Debility, Loss of Memory, Dimness of Sight, Lassitude, &c., resulting from the errors of youth. Sent post-free to any address, on receipt of a directed envelope, enclosing two postage stamps.—Address, Dr. SMITH, 8, Burton-crescent, Tavistock-square, London, W.C. 108

THE NEW FRENCH REMEDY, THERAPION, for nervousness, debility, and exhaustion. In four weeks restores manhood to the most shattered constitution, with marvellous certainty. Price 11s., or four times the quantity for 33s. Agents for England, THOMAS and Co., 7, Upper St. Martin's-lane, London, by whom it will be sent anywhere, carefully packed, on receipt of Post-office order. 109

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM.
BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS.
IN STOCK—FOR SALE OR HIRE. 110

RAILWAY WAGONS.—WILLIAM HARRISON AND CAMM HAVE ON HAND RAILWAY, COAL, COKE, AND MINERAL WAGONS, ON SALE OR HIRE,
AT THE ROTHERHAM WAGON WORKS, MASBRO'. 111

THE BIRMINGHAM WAGON COMPANY (LIMITED) HAS RAILWAY WAGONS FOR HIRE.
Apply to the SECRETARY, 3, Newhall-street, Birmingham. 112

THE RAILWAY CARRIAGE COMPANY,
OLDBURY, NEAR BIRMINGHAM.
MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND IRONWORK.
NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK FOR SALE OR HIRE.
LONDON OFFICES,—No. 1, MOORGATE. 113

ELECTRIC TELEGRAPH CONTRACTORS SUPPLIED with MALLEABLE IRON CASTINGS to pattern.
T. SHORT AND CO., 70, LEGGE STREET, BIRMINGHAM. 114

RAILWAY CONTRACTORS SUPPLIED with MALLEABLE IRON CASTINGS to pattern.
T. SHORT AND CO., 70, LEGGE STREET, BIRMINGHAM. 115

IRON PLATE WORKERS, BRAZIERS, and GALVANIZERS SUPPLIED with MALLEABLE IRON NIPPLES for SUGAR CONES to pattern.
T. SHORT AND CO., 70, LEGGE STREET, BIRMINGHAM. 116

NOTICE TO RAILWAY COMPANIES.—A RAILWAY SIGNAL of a NOVEL DESCRIPTION (patented) is NOW IN OPERATION on the MANCHESTER AND ALTRINCHAM RAILWAY, which GIVES NOTICE of the APPROACH of a TRAIN HALF A MILE OFF, and, if required, can announce it at any other given distance. It is novel and simple in its construction, not a single complicated movement in it, and when laid down will not require repairs for years. A model may be seen at the *Mining Journal* office, 26, Fleet-street, London, in the course of a week, and a gentleman will shortly call on the different railway companies centering in the metropolis to give any required explanations. 117

TRADE MARK ..... ♔

JAMES RUSSELL AND SONS, CROWN TUBE WORKS,
WEDNESBURY, STAFFORDSHIRE.
WAREHOUSE,—81, UPPER GROUND STREET, BLACKFRIARS, LONDON, S.
The ORIGINAL INVENTORS of WROUGHT IRON TUBES for GAS, WATER, &c. LAP-WELDED BOILER TUBES, HOMOGENEOUS TUBES for BOILERS, &c. GALVANISED and ENAMELLED TUBES, SCREWING TACKLE, STEAM and WATER GUAGES, and EVERY VARIETY of FITTINGS. 118

JOB TAYLOR AND CO., SWAN FOUNDRY,
OLDBURY, NEAR BIRMINGHAM,
SOLE PROPRIETORS of HINTON'S PATENT CUPOLA, which CONSUMES FIFTY PER CENT. LESS COKE than any cupola yet invented. MAKERS of ALL KINDS of MACHINERY connected with the GRINDING and TEMPERING of EVERY SORT of CLAY or MARL, and for the MANUFACTURE of BRICKS, TILES, DRAIN PIPES, &c. Also, of HIGH and LOW PRESSURE STEAM ENGINES of any dimensions, and of GENERAL MACHINERY. 119

LLOYD AND LLOYD, ALBION TUBE WORKS,
BIRMINGHAM,
MANUFACTURERS OF PATENT LAP-WELDED IRON TUBES, FOR LOCOMOTIVE, MARINE, AND STATIONARY BOILERS.
IMPROVED HOMOGENEOUS METAL TUBES.
ALL DESCRIPTIONS OF TUBES AND FITTINGS FOR GAS, STEAM AND WATER, PLAIN, GALVANISED AND ENAMELLED.
GUN-METAL STEAM GLAND COCKS, WATER GAUGES, &c. 120

SHORTRIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS of HOWELL'S PATENT HOMOGENEOUS METAL PLATES for BOILERS, LOCOMOTIVE FIRE BOXES, and TUBES, COMBINING the STRENGTH of STEEL with the MALLEABILITY of COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. McCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTRIDGE, HOWELL, and Co., Hartford Steel Works, Sheffield; or Messrs. HARVEY and Co., 12, Haymarket, London. 121

CORNISH BORER STEEL.—Upwards of ONE HUNDRED AND SIXTY MINES are SUPPLIED with this STEEL, and the DEMAND for it is RAPIDLY INCREASING.—For terms, apply to R. MUSHET and Co., Forest Steel Works, near Coleford, Gloucestershire. 122

CYANOGEN STEEL, CAST STEEL, SHEAR STEEL, and IMPROVED FOREST BLISTER STEEL supplied to order by ROBERT MUSHET and Co., Forest Steel Works, near Coleford, Gloucestershire.
Address to the Works, Coleford. 123

BELL BROTHERS beg to intimate that, having become SOLE LICENSEES in the United Kingdom of PROF. DEVILLE'S METHOD of PRODUCING PURE ALUMINIUM, they are now in a POSITION to SUPPLY, from their works here, both this metal and its compound with copper, known under the name of ALUMINIUM BRONZE.—Newcastle-on-Tyne, September, 1860. 124

TO COAL OWNERS AND COKE BURNERS.

MACKWORTH'S PATENT COAL WASHER, OR PURIFIER.—This MACHINE will EXTRACT the HALE and ALL HEAVY IMPURITIES from SMALL COAL at a COST of TWOPENCE PER TON.—For particulars and references, apply to the makers, A. and T. FRY, Temple-gate Works, Bristol; or to Mr. Jos. RIDER, Basinghall-street, Leeds. 125

COALS.—GEORGE J. COCKERELL AND CO.,
Coal Merchants to Her Majesty. Cash, 26s. per ton. Best coals only.
Central Office, 13, Cornhill, E.C. 126

GEORGE J. COCKERELL AND CO.,
Eaton Wharf, Grosvenor Canal, and Office, 1A, Lower Belgrave-place, Pimlico, S.W.

GEORGE J. COCKERELL AND CO.,
Purfleet Wharf, Earl-street, Blackfriars, E.C.

GEORGE J. COCKERELL AND CO.,
Sunderland Wharf, Peckham Canal, S.E.

WIRE-ROPE TESTING.

PUBLIC TEST of A. J. HUTCHINGS AND CO.'S PATENT WIRE-ROPE at LIVERPOOL, FEBRUARY 27, 1861.
[From the *Daily Post* of March 1, 1861.]

On Wednesday, the 27th of February, a series of EXPERIMENTS on WIRE-ROPE took place at the Corporation Testing Works, King's Dock. The specimens tested were manufactured by the well-known firm of A. J. HUTCHINGS and Co., of Millwall, London, the Contractors to the Lords of the Admiralty and various foreign Governments, the character of whose rope is so well known in this country, as well as all parts of the Continent. Capt. Ducraft, of H.M.S. *Hastings*, and a number of other gentlemen connected with shipping, were present to witness the experiments, all of which were considered highly satisfactory, and in every respect sustained the reputation of the manufacturers. The following are the results of the experiments:—

An 8 in. rope bore 70 tons WITHOUT BREAKING.
Circumference and breaking strain.

2¼	2⅝	3	3½	3⅝	4	4½
10¾ tons	14 tons	20 tons	27 tons	29 tons	32¾ tons	45½ tons

N.B.—The 2¼, 3, and 4 in. ropes were the sizes actually tested. The remaining sizes and strains are comparative.

THE ABOVE ROPES ARE FOR COLLIERY USE.

Size. Inches.	Hutchings and Co.'s wire-rope for ships' rigging. Tested Feb. 27, 1861.	Newall and Co.'s Test of Oct. 29, 1860.	Garnock, Bibby, and Co.'s Test, Oct. 29, 1860.
2	5 tons 15 cwts.	—	—
2¼	11 „ 14 „	7 tons 15 cwts.	8 tons 16 cwts.
2⅝	16 „ 10 „	—	—
3	22 „ 8 „	—	18 „ 5 „
3⅝	23 „ 10 „	16 „ 10 „	—
4	29 „ 10 „	18 „ 15 „	—
4½	37 „ 15 „	—	26 „ 10

N.B.—The 2, 3⅝, and 4 in. ropes were the actual sizes tested. The remaining sizes and strains are comparative.

The above tests certified by Mr. M'Donald the Superintendent of the Corporation Testing Works, Liverpool.

TEST OF WIRE-ROPE AT LIVERPOOL.—The value of Messrs. Hutchings's statement, relative to a test of their manufacture, will be properly estimated when it is known that the ropes were brought down from London specially prepared for the purpose, and not taken promiscuously from their stock, as the samples tested in October were.

The following, extracted from the *Mining Journal* of November 10, 1860, shows the relative strength of the different makers' ropes on that occasion. The samples tested were privately purchased some time previously, and spliced for testing by Newall and Co.'s workmen. The test took place in the presence of representatives from the manufacturers, reporters for the press, and a large number of gentlemen connected with mining and shipping in Liverpool:—

	SIZE OF ROPE TESTED. 3½ inch.	2½ inch.
Garnock, Bibby, and Co.'s broke at	18 tons 5 cwts.	8 tons 15 cwts.
R. S. Newall and Co.'s	16 „ 10 „	7 „ 15 „
A. J. Hutchings and Co.'s*	11 „ 10 „	5 „ 0 „

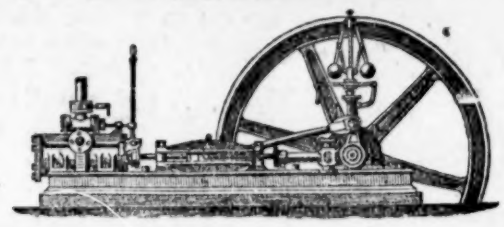
* Messrs. Hutchings's samples were from 1-16 to 3-16 over size.

From this it will be seen that the breaking point of Garnock, Bibby, and Co.'s ropes was on the average 13 per cent. over the guaranteed strain, while those of Hutchings and Co. were 30 per cent. below it.

GARNOCK, BIBBY, AND CO.,
SWAN HEMP AND WIRE-ROPE WORKS, CHAPEL STREET, LIVERPOOL.

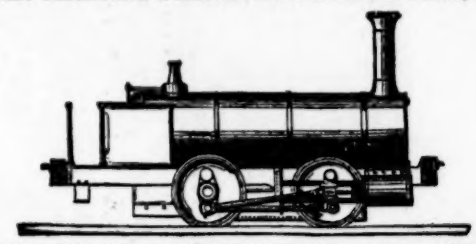
Flat and round wire-ropes of steel and charcoal iron for mines, inclines, &c., of first quality wire, and highest standard of strength. 128

MESSRS. E. PAGE AND CO.,
VICTORIA WORKS, BEDFORD,
AND LAURENCE POUNTNEY PLACE, CANNON STREET, LONDON
MANUFACTURERS OF



HIGH PRESSURE STEAM ENGINES, from 2½ to 30 horse power, and upwards, adapted for MINING and GENERAL PURPOSES. Prices and full particulars sent on application. 129

LOCOMOTIVE, STATIONARY, AND PORTABLE STEAM ENGINES.
CONTRACTORS' WAGONS, DOBBIN CARTS, BARROWS, and EVERY DESCRIPTION of RAILWAY and CONTRACTORS' PLANT, &c.



CHEAP LOCOMOTIVES for MINERAL RAILWAYS and OTHER PURPOSES.
HUGHES AND MARCH, ENGINEERS and MANUFACTURERS OF RAILWAY PLANT, and EVERY KIND of MACHINERY,
FALCON WORKS, LOUGHBOROUGH.

These engines are exceedingly useful in all cases where heavy loads have to be carried up steep inclines. They are fitted in the best style, and with every requisite. Messrs. HUGHES and MARCH, Falcon Works, Loughborough; or E. EDWARDS, Esq., C.E., 13, Beaufort-buildings, Strand, London.

MAKERS of the IMPROVED HORSE ENGINE, by which full power of the horses is given out without friction. It is applicable in all cases where horse power is required.

SECOND HAND PORTABLE STEAM ENGINES. 130

CLAYTON, SHUTTLEWORTH, AND CO.,
AGRICULTURAL AND GENERAL ENGINEERS,
LINCOLN, and 78, LOMBARD STREET, LONDON.
MANUFACTURERS OF

From 4 to 20 horse power.
Price lists sent gratis on application.

PORTABLE and FIXED STEAM ENGINES,

Which are adapted for every purpose to which steam-power can be applied. When intended for winding they are fitted with reversing link motion and requisite gearing. The portable engines are easy of removal from place to place, and may be set to work immediately on arrival.

COMBINED THRASHING MACHINES,

Which dress the corn ready for market at one operation.

GRINDING and MORTAR MILLS, SAWING MACHINERY, PUMPS for IRRIGATION and MINING PURPOSES.

Full particulars and estimates supplied on application to CLAYTON, SHUTTLEWORTH, and Co., as above. 131

MESSRS. KNOWLES AND BUXTON, CHESTERFIELD
MANUFACTURERS OF PATENT TUBULAR TUYERES.

Having been very successful in MANUFACTURING and REPAIRING the PATENT TUBULAR TUYERES, and securing our patent for a further term of years, we have great pleasure in offering them to the public, at a considerable REDUCTION IN PRICE.

Our manner of repairing will make them as LARGE and GOOD AS WHEN NEW (which is not the case with the ordinary tuyere) for half the first cost, when there is not more than two coils destroyed at the nozzle, all parties returning them carriage paid, and are confident they will be the cheapest and best ever offered to the mining world.

The PATENT TUBULAR TUYERES having maintained a most honourable reputation since their introduction, and been thoroughly proved to answer all the purposes set forth by the proprietors (when properly treated), it is, therefore, deemed unnecessary to publish a list of the patrons, or enumerate cases of their success. Although by such a procedure very much might be said in their favour, yet the readers would never be so fully convinced of their sterling worth as by a practical trial.

The future scale of prices will be as follows, including sockets:—

No. 1 Tuyere, 16 in. long			28s. each.
No. 2	„ 18	„	32s. „
No. 3	„ 20	„	36s. „
No. 4	„ 22	„	40s. „
No. 5	„ 24	„	44s. „

Delivered at Chesterfield station. Terms, nett cash quarterly. 132

PATENT PLUMBAGO CRUCIBLES.—The crucibles manufactured by the PATENT PLUMBAGO CRUCIBLE COMPANY have been in successful use for many years by some of the largest ENGINEERS, BRASSFOUNDERS, and REFINERS in this country and abroad. The great SUPERIORITY of these melting pots consists in their capability of melting on the average 35 to 40 pourings of the most difficult metals, and a still greater number of the ordinary character, some of them having actually been worked for the EXTRAORDINARY number of 96 heats. They are unaffected by change of temperature, never crack, and become heated much more rapidly than any other kind, thereby SAVING more than FIFTY PER CENT. in fuel, time, and labour. Lasting as they do for such a length of time, the saving of waste is also very considerable.

The company have recently introduced a CRUCIBLE SPECIALLY ADAPTED for MALLEABLE IRON MELTING, the average working of which has proved to be about seven days.

CRUCIBLES for STEEL MELTING are also made, which save nearly 1½ ton of fuel to every ton of steel fused.

The Patent Plumbago Crucible Company likewise manufacture and import clay crucibles, muffles, portable furnaces, &c., stove backs, all descriptions of fire-standing goods, and every requisite for the assayer and dentist.

For lists, testimonials, &c., apply to the Patent Plumbago Crucible Company, Battersea, Works, London, S.W. 133

WOTHERSPOON'S SCOTCH WHISKEY can now be supplied genuine as in Scotland, at WOTHERSPOON, MACKAY, AND CO.'S, 66, QUEEN STREET, E.C., in single bottles, or in quantity, price 3s. 8d. per bottle; 42s. per dozen. 134

SPAIN AND FRANCE.

Spain is determined to share the advantages resulting from an extended commercial intercourse with England. The Vintage Wine Company import Spanish wines at such prices as to induce customers to give the preference to sherry instead of to the light wines of France.—*Court Circular.*

Not only excellent in quality and flavour, but remarkable for cheapness—18s. per dozen for a genuine mild sherry for the dinner table.—*Sun.*

A pure, sound, and palatable wine, and far more fitted for our climate than the thin acrid clarets of France.—*Press.*

A really good sherry.—*Morning Star.*

XERES COMIDA SHERRY,
Soft, fine body, age and flavour, and genuine.
Eighteen Shillings per dozen. Pale, Twenty Shillings per dozen.

Quite equal to that for which we have been accustomed to give 60s.—*Atlas.*

Extraordinary for the money, and that no man need be ashamed to put on his table.—*Mark Lane Express.*

TERMS:—Cash only. Country orders must contain remittances. Town orders to be paid for on delivery.

CARRIAGE.—Orders of two dozen and upwards carriage paid to any railway station in England.

SAMPLES.—Samples of the wines forwarded on receipt of eighteen postage stamps. Bottles, &c., charged at cost price, but not returnable.

MODE OF REMITTANCE.—By Post-office order, payable at the General Post-office, London; or by cheque, crossed to the Bank of London.

N.B.—In either case the order or cheque to be made payable to the Vintage Wine Company.

Vintage Wine Company. Importers of Spanish wines.
WEST END OFFICES,—14, BLOOMSBURY STREET, LONDON, W.C. 135

THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
4000	Bedford United (copper), Tavistock†	2	6 8..	5¼.. 5 5¼ ..	12 11 6.. 0 3 0	—Dec. 1861
240	Boscean (tin), St. Just†	20	10 0..	60	35 10 0.. 1 5 0	—Dec. 1861
200	Botallack (tin, copper), St. Just	91	5 0..	250	443 5 0.. 2 10 0	—Feb. 1860
1000	Carn Brea (copper, tin), Illogan†	15	0 0..	85 .. 80 85 ..	269 10 0.. 2 0 0	—Feb. 1861
2048	Carnyorth (tin), St. Just	3	10 0..	1¾.. ..	0 19 6.. 0 2 0	—Sept. 1860
200	Cefn Cwm Brwyno (lead), Cardiganish.	33	0 0..	33	9 0 0.. 4 0 0	—April, 1861
50000	Connorree (copper, sulphur) [L. £1]	1	0 0..	31s. .. 32 ..	0 0 9.. 0 0 9	—July, 1860
2450	Cook's Kitchen (copper), Illogan	17	0 9..	30 .. 29¾30 ..	0 13 0.. 0 5 0	—Sept. 1861
12000	Copper Miners of England	25	0 0..	25	7½ per cent.	— Half-yrly.
350000	Ditto ditto (stock)	100	0 0..	24	1 per cent.	— Half-yrly.
1055	Craddock Moor (copper), St. Cleer*	8	0 0..	26	6 5 0.. 0 7 0	—Nov. 1861
867	Cwm Erfin (lead) Cardiganshire	7	10 0..	21	6 3 0.. 0 15 0	—Oct. 1861
128	Cwmystwith (lead), Cardiganshire*	60	0 0..	200	231 10 0.. 4 0 0	—Oct. 1861
280	Derwent Mines (sil.-lead), Durham	300	0 0..	180	142 0 0.. 5 0 0	—June, 1861
1024	Devon Gt. Con. (cop.), Tavist.* [S.E.]	1	0 0..	370 .. 360 370 ..	774 0 0.. 7 0 0	—Nov. 1861
358	Dolcoath (copper, tin), Camborne*	128	17 6..	550	648 10 0.. 8 0 0	—Dec. 1861
3000	Dyfngwm (lead), Wales	12	6 6..	10	0 5 0.. 0 2 6	—Nov. 1861
512	East Basset (cop.), Redruth [S.E.]*	29	10 0..	55 .. 52 54 ..	23 0 0.. 3 0 0	—Nov. 1861
6144	East Caradon (copper), St. Cleer [S.E.]	2	14 6..	28 .. 26¼ 29 ..	1 10 0.. 0 12 6	—Oct. 1861
300	East Darren (lead), Cardiganshire*	32	0 0..	45	78 10 0.. 1 0 0	—Oct. 1861
1400	Eyam Mining Co. (lead), Derbyshire	5	0 0..	—	20 3 4.. 0 10 0	—May, 1861
4940	Fowey Consols (copper), Tywardreath	4	0 0..	5	41 9 3.. 0 2 6	—June, 1860
2800	Foxdale (id.) [L.] [2560 £25 pd., 240 £15 pd.]†	35	.. ..	.. .. ..	64 12 7.. 1 12 0	—Sept. 1861
5000	Frank Mills (lead), Devon	3	18 6..	4¼.. ..	0 14 0.. 0 3 0	—Sept. 1861
6000	Great South Tolgus [S.E.], Redruth*	0	14 6..	4 .. 3¾ 4¼ ..	7 18 6.. 0 5 0	—Dec. 1861
1798	Great Wheal Fortune, Breage	18	6 0..	12 .. 12 13 ..	1 0 0.. 0 10 0	—July, 1861
5908	Great Wh. Vor (tin, cp.), Helston [S.E.]	40	0 0..	7 .. 6¼ 7 ..	1 12 6.. 0 7 6	—Sept. 1861
1024	Herodsfoot (id.), near Liskeard [S.E.]	8	10 0..	39 .. 37 39 ..	16 5 0.. 1 15 0	—Oct. 1861
1000	Hibernian Mine Company	92	6 9..	27½.. ..	7 10 0.. 0 15 0	—Sept. 1861
160	Levant (copper, tin), St. Just	2	10 0..	95	1091 0 0.. 5 0 0	—May, 1860
400	Lisburne (lead), Cardiganshire, Wales*	18	15 0..	110	377 10 0.. 2 0 0	—Oct. 1861
9000	Marke Valley (copper), Caradon	4	10 6..	10¾.. 9¾ 10 ..	1 6 0.. 0 5 0	—Oct. 1861
5000	Mendip Hills (lead) [L.], Somerset	3	15 0..	1¾.. ..	2 1 0.. 0 2 6	—May, 1860
1800	Minera Mining Co. [L.], (id.), Wrexham	25	0 0..	170	78 3 3.. 3 2 6	—Nov. 1861
20000	Mining Co. of Ireland (cop., lead, coal)	7	0 6..	15¼.. 15¾ ..	14 7 11.. 0 7 0	—June, 1861
640	Mount Pleasant (lead), Mold	4	0 0..	35	16 10 7.. 1 5 0	—Dec. 1861
6000	New Birch Tor and Vitifer Consols	1	6 6..	2¼.. ..	0 3 6.. 0 1 0	—Sept. 1861
6000	North Downs (copper) Redruth	2	3 4..	5 .. 4¾ 5 ..	0 7 6.. 0 5 0	—Dec. 1861
1366	North Grambler, Redruth	2	7 6..	6	0 10 0.. 0 10 0	—Mar. 1861
6000	North Great Work, Breage	1	3 0..	1¼.. ..	0 2 0.. 0 2 0	—May, 1860
5000	Oraedd (lead), Flintshire	0	0 8..	1¼.. ..	0 9 4.. 0 1 3	—Dec. 1861
6400	Par Consols (cop.), St. Blazey [S.E.]	1	2 6..	7¾.. 7¼ 7¾ ..	56 9 6.. 0 5 0	—Nov. 1861
200	Parys Mines (copper), Anglesey [L.]	50	0 0..	—	12 10 0.. 2 10 0	—Sept. 1861
200	Phœnix (copper, tin), Linkinghorne	100	0 0..	435	449 10 0.. 55 0 0	—May, 1861
1772	Polberro (tin), St. Agnes	—	.. ..	5	6 9 6.. 0 15 0	—April, 1861
1120	Providence (tin), Uny Lelant† [S.E.]	10	6 7..	39 .. 39 41 ..	61 15 0.. 1 0 0	—Nov. 1861
16	Rhosesmor	50	0 0..	—	1250 0 0.. 100 0 0	—Quarterly.
512	South Caradon (cop.), St. Cleer* [S.E.]	1	5 0..	325 .. 315 325 ..	361 0 0.. 5 0 0	—Nov. 1861
512	South Tolgus (cop.), Redruth, Cornwall*	8	0 0..	45 .. 46 48 ..	103 10 0.. 1 0 0	—Nov. 1861
496	South Wheal Frances, Illogan* [S.E.]	18	18 9..	112½..112½117½..	357 5 0.. 1 0 0	—Nov. 1861
280	Spearne Moor (tin, copper), St. Just	31	17 9..	45	9 15 0.. 1 0 0	—June, 1861
940	St. Ives Consols (tin), St. Ivest	8	0 0..	28 .. 27 29 ..	484 10 0.. 0 10 0	—Nov. 1861
9600	Tamar Con. (sil.-id.), Beeralston [S.E.]	4	10 0..	1¼.. 1 1¼ ..	5 6 0.. 0 2 6	—Jan. 1861
6000	Tincroft (cop., tin), Pool, Illogan [S.E.]	9	0 0..	8 .. 7¾ 8 ..	10 18 6.. 0 5 0	—Dec. 1861
572	Trelyon Consols (tin), St. Ives	11	10 0..	16	7 0 0.. 0 10 0	—Sept. 1860
200	Trumpet Consols (tin), near Helston	87	10 0..	100	53 0 0.. 1 0 0	—Aug. 1861
1024	Wendron Consols (tin), Wendron	11	13 10..	11 .. 10¼ 11 ..	8 15 0.. 1 0 0	—Jan. 1861
6000	West Basset (copper), Illogan [S.E.]	1	10 0..	14½..13¾ 14¼ ..	22 0 0.. 0 3 0	—Sept. 1861
60	West Burton Gill (lead), Yorkshire	50	0 0..	—	14 10 0.. 3 0 0	—June, 1861
1024	West Caradon (cop.), Liskeard [S.E.]*	5	0 0..	50 .. 47 49 ..	99 11 3.. 1 0 0	—Nov. 1861
256	West Damsel (copper), Gwennap	37	0 0..	52½.. ..	45 0 0.. 1 0 0	—May, 1860
6400	West Fowey Consols (tin and copper)	7	10 0..	3¾.. ..	0 14 0.. 0 2 0	—May, 1861
400	W. Wh. Seton (cop.), Camborne [S.E.]*	47	10 0..	295 .. 290 295 ..	330 0 0.. 8 0 0	—Dec. 1861
512	Wheal Basset (copper), Illogan* [S.E.]	5	2 6..	90 .. 84 86 ..	576 10 0.. 2 0 0	—Dec. 1861
256	Wheal Buller (cop.), Redruth* [S.E.]	5	0 0..	80	929 0 0.. 2 0 0	—May, 1861
2900	Wh. Clifford Amalgamated (cp.), Gwen.	30	0 0..	33 .. 30 31 ..	26 0 0.. 10 0 0	—Oct. 1861
2000	Wheal Falmouth and Sperries	2	5 0..	8	0 10 0.. 0 10 0	—Feb. 1861
128	Wheal Friendship (copper), Devon	50	0 0..	90	2400 10 0.. 5 0 0	—Feb. 1861
512	Wheal Jane (silver-lead), Kea	3	10 0..	18	11 10 0.. 1 0 0	—Oct. 1861
1024	Wheal Kitty (tin), Uny Lelant [S.E.]	1	7 2..	6¼.. ..	8 0 0.. 0 10 0	—Sept. 1860
4800	Wheal Ludcott (lead), St. Ive	2	10 8..	2½.. 2¼ 2¾ ..	1 12 0.. 0 4 0	—Oct. 1861
896	Wh. Margaret (tin), Uny Lel. [S.E.]†	9	17 6..	41 .. 39 41 ..	70 0 0.. 1 0 0	—Nov. 1861
100	Wheal Mary (tin), Lelant	36	2 6..	440	280 5 0.. 7 0 0	—June, 1860
1024	Wh. Mary Ann (id.), Menheniot [S.E.]†	8	0 0..	17 .. 16¼ 16¾ ..	54 17 6.. 0 10 0	—Dec. 1861
80	Wheal Owles, St. Just, Cornwall	70	0 0..	300	285 13 0.. 5 0 0	—Nov. 1861
896	Wheal Seton (tin, copper), Camborne	58	10 0..	126 .. 120 122¼ ..	133 5 0.. 1 10 0	—Dec. 1861
8000	Wicklow (copper) [L.], Wicklow	5	0 0..	54½.. 54 ..	43 17 6.. 2 0 0	—Oct. 1861

[* Dividends paid every two months. † Dividends paid every three months.]

MINES WITH DIVIDENDS IN ABEYANCE.

700	Aberdovey (silver-lead), Merioneth	1	10 0..	30	0 10 0.. 0 10 0	—Mar. 1859
5120	Alfred Consols (cop.), Phillack [S.E.]	3	3 6..	¾.. ⅛ ⅝ ..	20 3 0.. 0 2 6	—April, 1859
1624	Balliswidden (tin), St. Just	13	1 10..	12	12 5 0.. 0 5 0	—Jan. 1854
1200	Brightside & Froggatt Grove, Derbysh.	3	0 0..	3½.. ..	3 0 0.. 3 0 0	—April, 1856
200	Brynford Hall (lead), Flintshire	18	10 0..	25	14 0 0.. 2 10 0	—Oct. 1860
2500	Central Minera (lead) [L. £5]	0	15 0..	5½.. ..	0 4 0.. 0 4 0	—Sept. 1859
6000	Charlotte United, Perranuthnoe	2	13 2..	21s. .. 21s. ..	0 13 0.. 0 1 6	—Sept. 1859
2000	Collacombe (copper), Lamerton	5	5 0..	12	3 5 0.. 0 3 0	—Dec. 1857
256	Condurrow (cop., tin), Camborne	20	0 0..	65 .. 62½ 67½ ..	85 0 0.. 2 0 0	—June, 1857
256	Copper Hill (copper) Redruth	48	0 0..	102½.. 97½ 102½..	2 10 0.. 2 10 0	—Sept. 1859
4076	Devon and Cornwall (copper)	5	11 3..	6	0 10 0.. 0 2 6	—Feb. 1859
672	Ding Dong (tin), Gulval	39	2 6..	15	16 7 6.. 1 10 0	—Mar. 1857
12800	Drake Walls (tin, copper), Calstock	2	1 0..	1 .. 17s. 19s. ..	0 13 6.. 0 2 0	—Sept. 1857
3048	East Falmouth (sil.-id.), Kenwyn, Kea	3	5 0..	¼.. ..	0 7 6.. 0 2 6	—Jan. 1858
128	East Pool (tin, copper), Pool, Illogan	24	5 0..	240	305 0 0.. 2 10 0	—Aug. 1858
3048	East Wheal Lovell (tin), Wendron	2	13 6..	—	0 5 0.. 0 5 0	—July, 1859
6000	General Mining Co. for Irel. (cop., id.)	4	0 0..	5½.. 5¾ ..	1 0 8.. 0 3 3	—June, 1853
486	Grambler and St. Aubyn (cop.) [S.E.]	48	10 0..	19 .. 18 19 ..	23 0 0.. 1 0 0	—July, 1860
119	Great Work (tin), Germoe	100	0 0..	110	221 10 0.. 7 10 0	—Feb. 1857
200	Herward United (lead), Flintshire	40	0 0..	10 .. 3¼ 3¾ ..	3 0 0.. 1 10 0	—July, 1860
6000	Hingston Down Con. (cop.), Cals. [S.E.]	4	19 0..	4	2 16 0.. 0 2 6	—Nov. 1856
5000	Kelly Bray (lead, copper), Callington	4	8 0..	21s.	0 6 0.. 0 2 0	—Feb. 1860
20	Laxey Mining Company, Isle of Man	100	0 0..	1200	1420 0 0.. 50 0 0	—June, 1857
470	Newtownards Mining Co., Co. Down	50	0 0..	35	56 0 0.. 1 0 0	—Sept. 1858
700	North Roskear (copper), Camborne	18	0 0..	20 .. 18 20 ..	157 0 0.. 4 0 0	—Sept. 1853
512	Rosewarne United (cop., tin), Gwinear	19	6 4..	20 .. 18 20 ..	33 10 0.. 1 0 0	—Sept. 1860
12800	Sortridge Con. (cop.), Whitchurch [S.E.]	0	16 0..	13s. .. 11 13 ..	0 10 0.. 0 2 6	—July, 1857
128	South Crinnis (copper), St. Austell	19	0 0..	285	80 0 0..90 0 0	—June, 1855
20000	St. Day United (tin and cop.), Redruth	2	7 0..	¾.. ..	0 3 6.. 0 1 0	—Feb. 1858
6000	Tolvadden (copper), Marazion	0	6 0..	2	0 13 6.. 0 3 0	—Mar. 1860
20000	Vale of Towy (lead), Carmarthen [S.E.]	0	13 6..	¼.. ..	0 5 9.. 0 1 0	—July, 1858
1024	West Providence (tin), St. Erth	16	15 0..	35½.. ..	33 1 9.. 0 10 0	—April, 1857
240	Wheal Bal (tin), St. Just	15	0 0..	16	4 0 0.. 1 0 0	—Feb. 1859
4096	Wheal Edward (cop.), Calstock [S.E.]	7	7 6..	8	0 5 0.. 0 5 0	—Mar. 1858
1024	Wheal Grylls (tin), Perranuthnoe	2	4 0..	14¼..13¾ 14¼ ..	1 12 0.. 0 7 6	—Nov. 1859
5000	Wheal Kitty (tin), St. Agnes	4	16 6..	1	0 18 6.. 0 2 0	—July, 1860
345	Wheal Lovel (tin), Wendron	33	0 0..	7	31 0 0.. 1 0 0	—Sept. 1856
1024	Wheal Margery (tin, copper)	15	13 0..	9	0 10 0.. 0 10 0	—May, 1860
1040	Wh. Trelawny (sil.-id.), Liskeard [S.E.]	5	17 0..	17 .. 16 17 ..	43 15 0.. 1 0 0	—Oct. 1860
1022	Wheal Tremayne (tin, cop.), Gwinear	13	2 6..	5	10 2 6.. 0 7 6	—Jan. 1854

FOREIGN MINES.

2464	Burra Burra (cop.), South Australia	5	0 0..	116	365 0 0.. 5 0 0	—June, 1861
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40	0 0..	37 .. 35 36 ..	97 12 0.. 1 0 0	—July, 1861
10000	Copiapo Mining Company, Chili [S.E.]	16	0 0..	8	6 8 0.. 0 5 0	—Jan. 1861
16000	East Indian Coal, Calcutta [L.]	10	0 0..	10	7½ per cent.	— Yearly.
70000	English and Australian [S.E.]	5	0 0..	3½.. 2¾ 3¼ ..	1 5 0.. 0 2 6	—Aug. 1861
25000	Gen. Mining Assoc., Nova Scotia [S.E.]	20	0 0..	24	18 5 0.. 1 0 0	—June, 1861
48000	Kapunda Mining Co., Australia [S.E.]	1	0 0..	2½.. ..	0 8 0.. 0 2 0	—June, 1861
12000	Linares (id.), Pozo Ancho, Spain [S.E.]	3	0 0..	8	8 6 2.. 0 3 4	—July, 1861
10000	Lusitanian (of Portugal) [S.E.]	2	0 0..	2¼.. ..	0 18 2.. 0 1 6	—Aug. 1861
103815	Mariquita and New Granada [S.E.]	1	0 0..	⅜.. ⅛ ..	0 9 6.. 0 1 6	—July, 1859
100000	Port Phillip (gold), Clunes [S.E.]	1	0 0..	1½.. ..	0 4 0.. 0 1 0	—July, 1861
11000	St. John del Rey [L.], Brazil [S.E.]	15	0 0..	50 .. 48 50 ..	46 5 0.. 3 0 0	—Dec. 1861
20000	West Canada Mining Company [L.]	1	0 0..	1¼.. ..	0 2 0.. 0 2 0	—June, 1860

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Alten and Quesnangen Uni. (cop.) [L. £5]	4	10 0..	3	4 5 0.. 0 15 0	—Nov. 1853
10000	Gt. Barrier Land, Min. &c., N. Ze. [L. £5]	4	10 0..	3½.. ..	15 per cent.	—May, 1859
10000	Pontgibaud (sil.-lead), France [S.E.]	20	0 0..	4	1 0 0.. 1 0 0	—June, 1855
43174	Unit. Mexican (sil.), Mexico [S.E.] Av.	28	5 0..	8 .. 8 8¼ ..	1 16 6.. 0 4 0	—Feb. 1853

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
20000	Australian (copper), South Australia [S.E.]	7 7 6	1	¾ 1	Sept. 1858
75000	Bon Accord, South Australia (copper) [L. £1] [S.E.]	0 17 6	⅜	¼ ⅜	Dec. 1860
6000	Central American (silver) [L.]	5 0 0	12		Feb. 1859
17000	Central Italian (copper) [7000 £2 paid]	0 6 0	—		Jan. 1859
60000	Clarendon Consols (copper), Jamaica [S.E.]	0 17 6	⅜		Jan. 1861
10000	Copiapo Smelting [L.], Chili	10 0 0	8½		Fully paid.
75000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	1⅜	1 1¼	Fully paid.
25000	East del Rey, Brazil [L. £3]	1 0 0	1⅜		Sept. 1861
30000	East Kongsberg Native Silver Mining Co. of Norway [L. £5]	1 0 0	¾		April, 1861
30000	Ellerslie and Bardowie, Jamaica	0 18 0	1½		July, 1859
8000	English and Canadian Mining Company [L.]	5 0 0	—		Fully paid.
25000	Fortuna (lead), Spain [L.] [S.E.]	2 0 0	2¼		Fully paid.
80000	Great Northern (copper), South Australia [L. £2] [S.E.]	1 0 0	1⅝	1⅛ 1⅜	
4000	Hope Silver-Lead and Copper Mining Co. [L.], Jamaica	25 0 0	—		Fully paid.
50000	Imperial Thessalian (lead, &c.), Thessaly [L. £2]	0 10 0	⅜		June, 1860
30000	Lagunazo (sulphur, copper), Portugal [L. £1]	0 15 0	⅛		Dec. 1861
60000	New Granada (gold), South America [S.E.]	1 0 0	¼		Fully paid.
10000	New Grand Duchy of Baden (silver-lead), near Freiberg	1 0 0	1		Nov. 1858
60000	North Rhine Copper of South Australia [L. £1] [S.E.]	0 15 0	⅝		Nov. 1861
18000	Pachuca Silver Mining Company, Mexico [L. £1]	0 10 0	—		April, 1861
80000	Scottish Australian Mining Company [L. £1]	0 10 0	1⅜	1¼ 1½	Nov. 1858
15000	South Europe Mining Company, Spain [L. £5]	3 0 0	—		May, 1860
80000	St. John's United (copper, lead), Newfoundland [L.]	1 0 0	⅝		Fully paid.
45000	Victor Emanuel, Italy [L.] [20,000 Pref. Shares, 5s. pd., 25,000 £1 pd.		1⅜		
1000	Western Africa Malachite (copper) [L.]	110 0 0	—		Oct. 1859
12800	Wheal Ellen, South Australia [L. £5]	4 0 0	4¼		July, 1861
35425	Wheal Jamaica (copper)	1 0 0	18s.		Fully paid.
80000	Worthing (copper), South Australia [L.] [S.E.]	1 0 0	11s.		Fully paid.

PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
4225	Abbey Consols (id.) Cardigan	2 7 0..	1 ..		Nov. 1860
1000	Allt-y-Crib (lead) [L. £5]	2 8 6..	2 ..		June, 1861
10000	Angarrack (copper), Phillack	1 1 6..	1⅛..		June, 1859
1000	Ashburton United (cop., tin)	14 0 0..	14¾..		Oct. 1861
10000	Bampfylde (copper), Devon	0 15 0..	4 ..		Aug. 1860
4000	Bedford Consols (copper)	2 0 6..	3⅜..		Oct. 1861
2000	Berehaven (copper), Ireland	1 0 0..	1¼..		
6000	Bickerton (copper) [L.]	1 0 0..	3½..		Sept. 1861
7500	Bickleigh Vale Phœnix [L.]	2 0 0..	2¼..		Fully paid.
200	Billins (lead) [L. £30]	20 0 0..	20 .. 19 20		Feb. 1861
10000	Borlase Con. (tin), St. Just [L.]	1 0 0..	— ..		Fully paid.
1248	Boscaswell (tin), Penzance	6 5 0..	8 ..		Dec. 1860
2280	Boscundle (tin, cp.), St. Austell	6 15 0..	4 ..		Sept. 1860
160	Bosorne & Bollowall, St. Just	6 5 0..	10 ..		Dec. 1860
5000	Bottle Hill (tin), Plympton	1 0 0..	14s. ..	12s. 14s.	
12000	Brea Con. (tin), St. Ives [L. 30s.]	1 3 0..	22s. ..		Oct. 1861
5000	Bronfloyd (id.), Cardigan. [L.]	2 4 0..	4½..		Nov. 1861
112	Bron-Haulog (id.), Denbighsh.	20 0 0..	20 ..		No call.
5120	Brynambor (id.), Cardiganh.	1 5 0..	2½..		Oct. 1861
500	Bryn Gwiog (lead), Flint	5 0 0..	28 ..	26½ 27½ ..	Oct. 1861
2000	Bryntail, Llanidloes, Montgo.	5 7 0..	4 ..		Aug. 1861
5850	Budnick Consols (tin), Perran	1 8 0..	⅜..		Oct. 1861
6280	Buller and Basset Unit. (cop.)	3 7 6..	1⅜..		Oct. 1861
2448	Bwich (sil.-id), Cardiganshire	4 9 0..	2¾..		Nov. 1860
4096	Calstock Consols (copper)	5 10 0..	⅛..		Dec. 1860
915	Calvadnack, Wendron	18 5 0..	7¼..		Mar. 1861
1000	Camborne Consols (copper)	16 10 0..	8 ..		June, 1861
4600	Camborne Vean & Wh. Francis	7 17 4..	2 ..		Oct. 1861
914	Caradon Cons. (cop.), St. Cleer	28 7 0..	12½..		Dec. 1861
1000	Cardigan Consols [L. £10]	7 0 0..	9 ..		Mar. 1861
916	Cargoll (silver-lead), Newlyn	15 5 7..	15 ..		Sept. 1860
2580	Carmarthen United	5 0 0..	3 ..		Fully paid.
6000	Carn Camborne	0 7 0..	1 ..		May, 1861
4370	Carnewas (id., cop.), Mawgan	1 3 0..	¾.. ¾		June, 1861
3000	Carn Vivian (tin, cop., lead)	2 1 6..	2½..		Nov. 1861
7000	Carnack Dews	2 16 0..	1 ..		April, 1861
1056	Carvannall (cop.), Gwennap	21 11 7..	3 ..		Dec. 1860
20000	Carysfort (cop., id.) [L. £2¼]	0 10 0..	8s. ..		Mar. 1859
10000	Castleward, Ireland [L. £1]	0 15 0..	15s6d..		Mar. 1861
2500	Cefn Clicen (lead), Flintshire	1 5 0..	1 ..		Sept. 1860
984	Clijah & Wentworth (tin, cp.)	28 0 6..	2 ..		May, 1861
6000	Clinton and Edgecombe United	1 0 0..	1½..		Oct. 1860
3135	Coed Mawr Pool (lead) [L.]	4 7 0..	4 ..		June, 1861
2560	Colomendy (lead), near Mold	1 0 0..	21s. ..		No call.
5000	Cornubia (tin), Roche	1 0 0..	1¼..		Oct. 1861
10000	Craigton (id.) [L. £1], Kirkcud.	0 10 0..	¾..		June, 1859
876	Crane (copper), Camborne	11 0 0..	8 ..		Nov. 1861
30000	Craven Moor (id.), Yorkshire	0 10 0..	⅛..		No call.
12000	Crelake (cop.), Tavistock	—	3 ..		No call.
8000	Crookhaven (cop.) [L. £2¼]	1 0 0..	6s. 6d..		Mar. 1861
2000	Crowlwm (lead), Llanidloes	1 10 0..	⅞..		No call.
6000	Crowndale (cop.), Tavistock	0 11 0..	3 ..		Nov. 1858
6000	Cuddra (cop., tin), St. Austell	2 9 0..	2¾..		Nov. 1861
21000	Dale, North Staffordshire [L.]	1 0 0..	1 ..		Fully paid.
4817	Devon and Courtenay (cop.)	1 11 0..	11s. ..		Oct. 1861
5000	Devon Great Wheal Ellen	2 0 0..	— ..		Mar. 1861
12000	Dev. New Copper Co. [L. £2]	—	2 ..		
12000	Devon Union (copper) [L. £1]	0 15 0..	¾..		Oct. 1861
4566	Devon Wheal Buller (copper)	3 15 0..	¾..		Dec. 1861
1000	Durlo (tin), Lelant	6 12 0..	7⅛..		Mar. 1861
2000	Dolcoath United [L. £5]	1 0 0..	2¾..		June, 1860
3000	Dulta (tin) [L. £1]	—	1 ..		
2544	Eaglebrook (lead.), Cardigan	77 10 0..	16 ..		Oct. 1861
600	East Abraham, Crowan	7 10 0..	7¾..		Oct. 1861
4096	East Alfred Consols (copper)	3 19 11..	1¼.. 1 1¼		Dec. 1861
3000	E. Beam (tin), St. Aus. [L. £2]	0 16 0..	2¼..		Nov. 1861
6000	E. Bertha Con. (cop.), Tavist.	0 17 0..	1⅛..		July, 1861
6000	East Budnick and Mount	0 10 0..	⅜.. 5s. 7s.		Jan. 1861
6000	East Carn Brea (cop.) Redruth	3 11 0..	9¾.. 9¾ 10		Oct. 1861
6400	East Crinnis and South Par.	2 11 6..	2 ..		Sept. 1861
6000	East Damsel	1 10 0..	1¼..		
4000	East Devon Gt. Consols (cop.)	0 13 6..	2 .. 1¾ 2		Sept. 1861
4000	East Fowey (cop.) [L. 50s.]	1 5 0..	1⅛..		June, 1861
6000	E. Grenville (cop.), Camborne	0 19 6..	1⅜..		Oct. 1861
4000	E. Gunnis Lake & S. Bedf. (cp.)	6 10 6..	¾.. 1⅛ 1¾		Oct. 1861
12000	East Mona (cop., &c.) [L. £1]	0 5 0..	— ..		May, 1861
8000	East Polberro, St. Agnes	0 5 0..	⅛..		May, 1861
4096	E. Providence (tin), Uny Lel.	2 3 5..	2¼..		June, 1861
6000	E. Releath (tin, cop.), Wendron	0 1 0..	1 ..		Aug. 1860
5000	E. Rosewarne (cp., tin), Gwin.	2 12 0..	1¼.. 1¼		Sept. 1861
1122	East Seton, Camborne	0 3 0..	⅛..		Oct. 1861
256	East Tolgus (copper), Redruth	63 0 0..	30 ..		Oct. 1861
1000	E. Trefusis (cop.), Gwennap	7 14 7..	1 ..		Sept. 1861
1024	E. Treskerby (cop.), Redruth	3 10 0..	2 ..		July, 1861
1190	E. Wheal Agar (cop.), St. Cleer	8 7 0..	2¾..		July, 1861
6000	E. Wh. Ellen (sil.-id.), St. Ive	0 1 0..	⅛..		July, 1860
4000	E. Wh. Russell, Tavis. [S.E.]	7 7 0..	3½.. 3 3¼		Dec. 1861
5700	Exmouth (sil.-id.), Christow	5 19 0..	1¼..		Nov. 1861
6000	Fowey and Par Uni., St. Blazey	0 10 0..	1⅛..		Nov. 1860
5000	Fursdon (cp.), Okeham [L. 30s.]	1 7 6..	2½..		Oct. 1

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